WebConnect

User Guide

WebConnect 7.3

Second Edition

June 26, 2014

OpenConnect Systems, Inc.
2711 LBJ Freeway, Suite 700
Dallas TX 75234
Phone: 972.484.5200
Fax: 972.484.6100
Web: www.oc.com

Notices

OpenConnect Systems® Incorporated continuously updates its product publications. It is the user's responsibility to ensure that this edition is applicable and current before using this publication in conjunction with any OpenConnect Systems product. OpenConnect Systems makes no warranties with the respect to the contents of this publication and does not assume any liability arising out of the use of any product described in this publication. The information contained in this document is believed to be correct at the time of publication. It is subject to change without notice.

Copyright© 2014 by OpenConnect Systems® Incorporated, all rights reserved. This material contains trade secrets and confidential proprietary information of OpenConnect Systems. Use of copyright notice is precautionary only and does not imply publication. No part of any book may be reproduced or transmitted in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, taping, or by any information storage or retrieval system, without the permission in writing from OpenConnect Systems.

Printed in U. S. A.

IEN-WCT-UM 6/26/14

Trademarks

OpenConnect Systems is a registered service mark of OpenConnect Systems Inc. eXtremeVista is a registered trademark of OpenConnect Systems Inc.

Mainframe2Web, OpenConnect, Secure ClientConnect, SNA Access Server, SNA Print Server, Visual 3270, WebConnect SSO and xmlConnect are trademarks of OpenConnect Systems Inc. in the United States and/or other countries.

All other products and services mentioned are trademarks of their respective companies. The technology of WebConnect and WebConnect SSO is covered under U.S. Patent number 5,754,830.

Notational conventions

This section describes notational conventions used in this book.

`bold monospace`	In command examples, **`bold monospace`** identifies input that must be typed exactly as shown.
`monospace`	In paragraph text, `monospace` identifies command names, system calls, and data structures and types. In command examples, `monospace` identifies command output, including error messages.
italic	In paragraph text, *italic* identifies titles of documents. In command syntax diagrams, *italic* identifies variables that you must provide. The following command example uses brackets to indicate that the variable *output_file* is optional: `command` *input_file* [*output_file*]
Brackets ([ ])	In command examples, square brackets designate optional entries.
Curly brackets ({}), Pipe (|)	In command syntax diagrams, text surrounded by curly brackets indicates a choice. The choices available are shown inside the curly brackets and separated by the pipe sign (|). The following command example indicates that you can enter either `a` or `b`: `command {a | b}`
Horizontal ellipses (...)	In command examples, horizontal ellipses show repetition of the preceding items.
Vertical ellipses . . .	Vertical ellipses show that lines of code have been left out of an example.
Keycap	***Keycap*** indicates the keyboard keys you must press to execute the command example.

Note: A note highlights important supplemental information.

Warning: A warning highlights procedures or information necessary to avoid damage to equipment, damage to software, loss of data, or invalid test results.

Document History

Release Date	Change Description
July 1999	WebConnect Manager Server Version 3.0 software release.
October 1999	WebConnect Manager Server Version 3.1 software release.
January 2000	Added new company logo and License Manager information for WebConnect SNA Access Server.
August 2000	WebConnect Manager Server Version 4.4 software release.
April 2001	WebConnect 5.0 Release
August 2001	WebConnect 5.1 Release
April 2002	WebConnect 6.0 Release
July 2002 August 2002	WebConnect 6.1 WebConnect 6.1.x (Revised)
February 2003	WebConnect 6.2 with Network License Manager
January 2004	WebConnect 6.3
June 2004	WebConnect 6.4
August 2004	WebConnect 6.4.2
April 2005	Third Edition WebConnect 6.5.3
October 2005	Fourth Edition - Macro Toolbar added
March 2006	WebConnect 6.6 Release
August 2007	WebConnect 7 Release
September 2008	Second Edition with corrections.
February 2009	Third Edition with corrections.
August 2012	FTP menu item added.
March 2014	WebConnect 7.3

Contents

Chapter: 1 Introduction 19

WebConnect Features 19
- Full-Featured Emulation 19
- User Manual layout 19
- Client Technologies 20

Browser Environment and Java Support 21
- Identifying the Client Type 21
- Identifying client type by visual clues within the interface . 22
- Network Environment 24
- Browser Support 25
- SFile Access Authority 26

Chapter: 2 Using WebConnect 27

Session Folders 27
- Navigation 28

User Menu 29
- LOGOUT 29
- PREFERENCES 29
- IDENTITY 29
- DOWNLOADS 30
- SESSIONS 30
- Display Language 30
- HELP 30

Preferences 30
- View 32
  - Icon View 32
  - List View 32
- Printing 32
  - WebPrint 32
  - JDK Print solution 32
  - JavaScript print option 32
  - Print to File 32
  - Windows Print 33
- Trace Each Session 33
- Store User Files On: 34
  - Server 34
  - Desktop 34
  - No user files: 34
- Single Sign-On 34

Password Management 34
Password Length and Strength 35
Password History 36
Password Examples 36
Character Limitations for Passwords and User Names 36

Chapter: 3 Downloads 39

Downloads with Java Runtime Environment (JRE) 40
Installing WebPrint 40
Installing the WebConnect Emulation API Package 41
Uninstall the WebConnect Emulation API Package . . . 41
Downloading .NET Components 41
Downloads with Desktop Emulator Enabled 44
Installing WebConnect Desktop Emulator 44
. 45

Chapter: 4 Classic Client Sessions47

Controller Applet 48
3270, 5250, and VT Client Emulation Features 50
Menu Bar 51
Macro Toolbar 53
Session Toolbar Menu 54
Emulation Space 55
ClickPad 56
Copy and Paste Features 56
Copy 56
Paste 58
3287 Client Emulation Features 59
Menu Bar 59
Session Window 59
3812 Client Emulation Features 60
Menu Bar 60
Session Window 61
Macro Record/Play 61
Recording a Macro 63
Saving a Macro File 64
Playing a Macro 65
Stopping a Macro During Play 66
Deleting a Macro 66

Chapter: 5 Classic Client Printing69

WebPrint 69
Printing a Screen 69
VT Session Logging 69
VT Log Session to Printer 70
VT Log Session to File 71
3287 Print Session 71
3812 Print Session 72
Date/Time Stamp Operation 72
Print to File Date/Time 73

Chapter: 6 Classic Client File Transfer75

Sending and Receiving CICS/VS Files 76
UNIX Format 76
Transfer Options 77
Sending and Receiving TSO Files 78
Append a File 80
Advanced Options 81
Sending and Receiving VM Files 82
Multiple File Transfers 84
File Transfer Lists 85

Chapter: 7 Classic Client User Preferences87

Edit>Preferences Menu 88
Configuring Hot Spots 88
Configuring Colors 90
Configuring Attributes 91
The Setting Menu 92
Cursor to Mouse (Light Pen) 92
Type-ahead 93
Cursor Options 93

Chapter: 8 Classic Client WC Key Map, Macro, and VB Script Editor97

User Key Map Configuration Window 98
Key Commands 99
Creating a New Key Command 99

Editing a Key Command 101
Wait 103
WebConnect Macros 107
Create a WebConnect Macro 107
Create a New WebConnect Macro 109
Import WebConnect Macro 110
VB Scripts 112
Creating a New VB Script 113
Import VB Script 114
Editing a VB Script 114
Remove a VB Script 115
User Macro Autostart 115
Assigning Autostart Macros 117
Unassigning Startup Macros 119

Chapter: 9 .NET Client Sessions121

3270, 5250, and VT Client Emulation Features 122
Menu Bar 123
Session Toolbar Menu 125
Tab Bar 126
Emulation Space 126
ClickPad 127
Copy and Paste Features 127
Copy 127
Paste 130
Right-Click Menu 130
3287 and 3812 Client Emulation Features 131
Menu Bar 131
Session Window 132
Recording and Playing Macros 132
Recording a Macro 133
Playing a Macro 135
Stopping a Macro During Play 136
Deleting a Macro 136
Session List 137

Chapter: 10 .NET Client Printing139

Printing a Screen 139
Printing Part of a Screen 139
VT Session Logging 139

VT Log Session to Printer 140
VT Log Session to File 141
3287 Print Session 141

Chapter: 11 .NET Client File Transfer143

Sending and Receiving CICS/VS Files 144
UNIX Format 145
Transfer Options 145
Sending and Receiving TSO Files 146
Append a File 148
Record Format and Space Options 149
Sending and Receiving VM Files 150
Multiple File Transfers 153

Chapter: 12 .NET Client User Preferences157

Preferences Menu 158
Configuring Colors 158
Configuring the ClickPad 159
ClickPad Configuration: Row/Col Size and Docking Position 159
Floating 161
Emulator Keys: Move Up, Move Down and Delete Buttons 161
Emulator Key Section 162
Padding 162
Macro Section 163
Display Preview 164
Configuring Attributes 165
Configuring Hot Spots 167
The Settings Menu 169
Cursor Options 172
Type-ahead 173
Move Cursor with Mouse (Light Pen) 174

Chapter: 13 .NET Client WC Key Map, Macro, and VB Script Editor175

User Key Map Configuration Window 176
Key Commands 178
Creating a New Key Command 178

Editing a Key Command 178
WebConnect Macros 181
Create a WebConnect Macro 182
Wait 183
Import WebConnect Macro 186
VB Scripts 189
Creating a New VB Script 189
Import VB Script 191
Editing a VB Script 191
Remove a VB Script 192
User Macro Autostart 192
Assigning Autostart Macros 193
Unassigning Startup Macros 195

Chapter: 14 Swing Client Sessions197

3270, 5250, and VT Client Emulation Features 198
Menu Bar 199
Session Toolbar Menu 201
Tab Bar 202
Emulation Space 203
ClickPad 203
Copy and Paste Features 204
Copy 204
Paste 206
Right-Click Menu 206
3287 and 3812 Client Emulation Features 208
Menu Bar 208
Session Window 209
Recording and Playing Macros 209
Recording a Macro 210
Saving a Macro File 211
Playing a Macro 211
Stopping a Macro During Play 212
Deleting a Macro 213
Session List 214

Chapter: 15 Swing Client Printing217

Printing a Screen 217
Printing Part of a Screen 217
VT Session Logging 217

VT Log Session to Printer 218
VT Log Session to File 219
3287 Print Session 219
Date/Time Stamp Operation 220
Print to File Date/Time 220

Chapter: 16 Swing Client File Transfer223

Sending and Receiving CICS/VS Files 224
UNIX Format 225
Transfer Options 225
Sending and Receiving TSO Files 226
Append a File 228
Record Format and Space Options 229
Sending and Receiving VM Files 230
Multiple File Transfers 233

Chapter: 17 Swing Client User Preferences237

Preferences Menu 238
Configuring Colors 238
Configuring Attributes 239
Configuring the ClickPad 240
ClickPad Configuration: Row/Col Size and Docking Position 240
Floating ClickPad 243
Emulator Keys: Move Up, Move Down and Delete Buttons 243
Emulator Key Section 244
Padding 244
Macro Section 245
Display Preview 247
Configuring Hot Spots 248
The Settings Menu 250
Cursor Options 254
Type-ahead 255
Move Cursor with Mouse (Light Pen) 256

Chapter: 18 Swing Client WC Key Map, Macro, and VB Script Editor257

User Key Map Configuration Window 258

Key Commands 260
Creating a New Key Command 260
Editing a Key Command 260
Wait 262
WebConnect Macros 266
Create a WebConnect Macro 267
Create a New WebConnect Macro 268
Import WebConnect Macro 269
VB Scripts 272
Creating a New VB Script 272
Import VB Script 273
Editing a VB Script 274
Remove a VB Script 274
User Macro Autostart 275
Assigning Autostart Macros 276
Unassigning Startup Macros 278

Chapter: 19 HTML Client Emulation. 279
3270 HTML Client 280
5250 HTML Client 281
3287 HTML Client 282
Input Field Validation 282
3270 Input 283
5250 Input 283
HTML Color Scheme 283
HTML ClickPad Functions 284
HTML Keyboard Mapping 285
3287 Print to HTML Client 286
HTML 3270/3287 Associated Printer Session 286
3812 Print Session 288

Chapter: 20 Desktop Emulator 289
Desktop Emulator 289
Starting the Desktop Emulator 289
Sessions Tab 289
Authentication 291
Basic Authentication 291
Portal Form Authentication 292
Proxy Authentication 292
Updates 293

Figures

Figure 1-1: Classic Client 22
Figure 1-2: Swing Client 22
Figure 1-3: .NET Client 23
Figure 1-4: HTML Client 24
Figure 2-5: SESSION Panel Default View 27
Figure 2-6: SESSION Panel Folders Enabled View 28
Figure 2-7: SESSION Folder 29
Figure 2-8: .NET Client PREFERENCES Window 31
Figure 2-9: Swing Client PREFERENCES Window 31
Figure 2-10: Print to File Dialog 33
Figure 2-11: Changing your Password 35
Figure 3-12: User Downloads with JRE 40
Figure 3-13: User Menu 42
Figure 3-14: .NET Components 43
Figure 3-15: User Downloads with Desktop Emulator 44
Figure 4-16: SESSION Panel 47
Figure 4-17: Session Controller Applet 48
Figure 4-18: Client Window 50
Figure 4-19: EHLLAPI Configuration Window 52
Figure 4-20: Macro Toolbar Configuration Window 53
Figure 4-21: Record/Play Macro 62
Figure 4-22: Play Macro Menu 63
Figure 4-23: Record Macro Name 63
Figure 4-24: Stop Recording Macro 64
Figure 4-25: Save Recorded Macro 65
Figure 4-26: Play Recorded Macro 65
Figure 4-27: Delete Macro 66

Figure 4-28: Delete Macro Confirmation 67
Figure 5-29: Log VT Session to Printer 70
Figure 5-30: Print to File Dialog 73
Figure 5-31: Print to File Time/Date Stamp 73
Figure 6-32: File Transfer Options 76
Figure 6-33: TSO File Transfer Example 79
Figure 6-34: Advanced Options 81
Figure 6-35: File Transfer List Name 85
Figure 6-36: Transfer List Name 86
Figure 7-37: Edit User Preferences 88
Figure 7-38: Configure Hot Spots. 89
Figure 7-39: Edit Color Configuration. 90
Figure 7-40: Attribute Configuration 91
Figure 7-41: Attributes Toolbar. 91
Figure 7-42: Setting Cursor Menu 94
Figure 7-43: Cross-hair Cursor. 95
Figure 8-44: SESSION panel 98
Figure 8-45: Key Map Menu. 98
Figure 8-46: Key Map/Macro Configuration 99
Figure 8-47: Create Key Sequence 100
Figure 8-48: Key Command Action 101
Figure 8-49: Add Key Map Commands 102
Figure 8-50: Wait Tab 104
Figure 8-51: 3270 Session 107
Figure 8-52: WebConnect Macro Menu 108
Figure 8-53: WebConnect Macros 108
Figure 8-54: Name New Macro 109
Figure 8-55: Define Macro Action. 109
Figure 8-56: Configure New Macro 110

Figure 8-57: Import Macro 111
Figure 8-58: Imported Macro 111
Figure 8-59: VB Scripts Tab 113
Figure 8-60: New VB Script Name 113
Figure 8-61: New VB Script 114
Figure 8-62: WebConnect Script Editor 115
Figure 8-63: User Autostart Macros 117
Figure 8-64: User Macro Autostart 118
Figure 9-65: SESSION Panel 121
Figure 9-66: Client Window 122
Figure 9-67: ClickPad Configuration 127
Figure 9-68: 3287 and 3812 Client Emulation 131
Figure 9-69: Record Macro 133
Figure 9-70: Record Macro Name 133
Figure 9-71: End Recording Macro 134
Figure 9-72: Save Recorded Macro 134
Figure 9-73: Play Macro Menu 135
Figure 9-74: Recorded Macro List 135
Figure 9-75: Key Macro Window 136
Figure 9-76: Delete Macro 137
Figure 9-77: Session List 137
Figure 9-78: .NET Placeholder 138
Figure 10-79: Log VT Session to Printer 140
Figure 11-80: CICS Tab 144
Figure 11-81: TSO File Transfer Example 147
Figure 11-82: Record Format Options 149
Figure 11-83: TSO File Transfer Example 151
Figure 11-84: Lists 154
Figure 11-85: INDFILE Transfer 155

Figure 12-86: Edit Color Configuration 158
Figure 12-87: ClickPad Configuration 160
Figure 12-88: Floating Enabled 161
Figure 12-89: Padding 163
Figure 12-90: Add Macro 164
Figure 12-91: Preview 164
Figure 12-92: Attribute Configuration 165
Figure 12-93: Edit User Preferences 167
Figure 12-94: Configure Hot Spots 168
Figure 12-95: Settings 169
Figure 12-96: Settings Cursor Menu 172
Figure 12-97: Cross-hair Cursor 173
Figure 13-98: SESSION panel 176
Figure 13-99: Key Map Menu 177
Figure 13-100: Key Map/Macro Configuration 177
Figure 13-101: Create Key Sequence 178
Figure 13-102: Add Key Map Commands 179
Figure 13-103: 3270 Session 181
Figure 13-104: WebConnect Macros Tab 182
Figure 13-105: Name New Macro 182
Figure 13-106: Define Macro Action 183
Figure 13-107: Wait Tab 184
Figure 13-108: Import Macro 187
Figure 13-109: Import Macro 187
Figure 13-110: Imported Macro 188
Figure 13-111: VB Scripts 189
Figure 13-112: New VB Script Name 190
Figure 13-113: New VB Script 190
Figure 13-114: WebConnect Script Editor 191

Figure 13-115: User Autostart Macros 193
Figure 13-116: User Macro Autostart 194
Figure 14-117: SESSION Panel 197
Figure 14-118: Swing Client Window 198
Figure 14-119: ClickPad Configuration 203
Figure 14-120: 3287 and 3812 Client Emulation 208
Figure 14-121: Record Macro Name 210
Figure 14-122: Save Recorded Macro 211
Figure 14-123: Recorded Macro List 212
Figure 14-124: Key Macro Window 213
Figure 14-125: Delete Macro 213
Figure 14-126: Session List 214
Figure 14-127: JRE Placeholder 214
Figure 15-128: Log VT Session to Printer 218
Figure 15-129: Print to File Dialog 220
Figure 15-130: Print to File Time/Date Stamp 221
Figure 16-131: CICS/VS Files 224
Figure 16-132: TSO File Transfer Example 227
Figure 16-133: Record Format Options 229
Figure 16-134: Lists 233
Figure 16-135: INDFILE Transfer 234
Figure 17-136: Edit Color Configuration 238
Figure 17-137: Attribute Configuration 239
Figure 17-138: ClickPad Configuration 241
Figure 17-139: ClickPad Docked East 241
Figure 17-140: ClickPad Docked North. 242
Figure 17-141: Floating Enabled 242
Figure 17-142: Handler Bar 243
Figure 17-143: Padding 245

Figure 17-144: Add Macro 246
Figure 17-145: Macros 246
Figure 17-146: ClickPad Preview 247
Figure 17-147: Edit User Preferences 248
Figure 17-148: Configure Hot Spots 249
Figure 17-149: Settings 250
Figure 17-150: Settings Cursor Menu 254
Figure 17-151: Cross-hair Cursor 255
Figure 18-152: SESSION panel 258
Figure 18-153: Key Map Menu 259
Figure 18-154: Key Map/Macro Configuration 259
Figure 18-155: Create Key Sequence 260
Figure 18-156: Add Key Map Commands 261
Figure 18-157: Wait Tab 263
Figure 18-158: 3270 Session 266
Figure 18-159: WebConnect Macro Menu 267
Figure 18-160: WebConnect Macros Tab 268
Figure 18-161: Name New Macro 268
Figure 18-162: Define Macro Action 269
Figure 18-163: Import Macro 270
Figure 18-164: Import Macro 270
Figure 18-165: Imported Macro 271
Figure 18-166: VB Scripts Tab 272
Figure 18-167: New VB Script Name 273
Figure 18-168: New VB Script 273
Figure 18-169: WebConnect Script Editor 274
Figure 18-170: User Autostart Macros 277
Figure 18-171: User Macro Autostart 277
Figure 19-172: SESSION panel 279

Figure 19-173: 3270 HTML Client 280
Figure 19-174: 5250 HTML Client 281
Figure 19-175: 3287 HTML Print 282
Figure 19-176: 3287 Associated Print 286
Figure 19-177: About Server 3287 Print 287
Figure 19-178: 3287 Associated Print Jobs 287
Figure 19-179: 3287 Print Jobs 288
Figure 20-180: WebConnect Sessions tab 290
Figure 20-181: Icon context menu 290
Figure 20-182: Tab space context menu 291
Figure 20-183: WebConnect User Credentials 292
Figure 20-184: Web Proxy Credentials 293
Figure 20-185: Emulation Update 293

Tables

Table 2-1: Invalid Characters 37
Table 4-2: Session Menu Options 51
Table 4-3: Macro Toolbar Details 53
Table 4-4: Emulation Icon Values 54
Table 4-5: Keyboard Mapping 56
Table 4-6: 3287 Menu Functions 59
Table 6-7: SNA Host/Application Transfer 75
Table 8-8: Macro Editor Command Descriptions 102
Table 8-9: Wait Options—After next AID key Disabled 105
Table 8-10: Wait Options—After next AID key Enabled 106
Table 9-11: Session Menu Options 123
Table 9-12: Emulation Icon Values 125
Table 9-13: Keyboard Mapping 128
Table 9-14: Right-Click Menu 130
Table 9-15: 3287 Menu Functions 131
Table 11-16: SNA Host/Application Transfer 143
Table 12-17: Settings Options 169
Table 13-18: Macro Editor Command Descriptions 179
Table 13-19: Wait Options—After next AID key Disabled 184
Table 13-20: Wait Options—After next AID key Enabled 185
Table 14-21: Session Menu Options 199
Table 14-22: Emulation Icon Values 201
Table 14-23: Keyboard Mapping 204
Table 14-24: Right-Click Menu 207
Table 14-25: 3287 Menu Functions 208
Table 16-26: SNA Host/Application Transfer 223
Table 17-27: Settings Options 250
Table 18-28: Macro Editor Command Descriptions 261
Table 18-29: Wait Options—After next AID key Disabled 263

Table 18-30: Wait Options—After next AID key Enabled 264
Table 19-31: OIA Input Field Validation Symbols 283
Table 19-32: HTML Client ClickPad Functions 284
Table 19-33: HTML 3270 & 5250 Keyboard Mapping 285

1 Introduction

WebConnect enables enterprise organizations to provide suppliers, partners and employees with secure access to vital mainframe and midrange applications and information. Enterprises increase productivity and profits, while retaining all the advantages of secure host connectivity to new and existing applications in “real-time.” This access is provided without requiring any modifications to the original applications. WebConnect provides reliable, secure, and scalable host access using a Java™, .NET, or JavaScript enabled Web browser. To deliver traditional host-access emulation features over an intranet or the Internet, WebConnect combines the strengths of traditional client/server technology with the network access and ease of use of popular browsers and client technologies. The WebConnect servers on UNIX and Windows are all secured by Secure Sockets Layer (SSL) authentication and encryption or RSA Data Security™ encryption.

WebConnect Features

WebConnect provides all the features of traditional emulation clients with centralized server management. Java applets, .NET clients and HTML clients for 3270, 3287 print, 3812 print, 5250, VT, and VT/SSH emulations are included.

Full-Featured Emulation

In addition to traditional client emulation features, WebConnect also includes TN3270E protocol support, screen print, enhanced copy and paste, hot spots, record and play macros, Visual Basic macros, and IND$FILE file transfer. Administrators or end users can modify user interface options such as keyboard and color mappings.

User Manual layout

This user manual describes features and configuration options for all supported client types and underlying technologies. The table of contents of this manual clearly shows which chapters apply to which

client types by embedding the client type name (Classic, Swing, .NET or HTML) into the chapter title. Small differences may exist between client types and as such are documented within their respective chapters. However, most features are supported in similar fashion across Swing (Java 1.5+) and .NET (.NET 2.0) clients and significant training differences would not be expected. In general, features and configuration options are discussed within the context of their position within the client user interface menu system.

Client Technologies

WebConnect can be configured to provide secure communication to your host environment across a variety of underlying client technologies including:

- Classic applet (Java 1.1+)
- Swing applet (Java 1.5+)
- .NET client (.NET 2.0)
- HTML client (HTML 1.0).

Additionally, the Classic applet allows a basic 1-for-1 screen refacing called AutoVista. AV clients have limited user menu preferences.

The choice of what client is provided to the end user is made by the WebConnect Administrator and is not configurable by the end user. A given WebConnect server can support a mix of different client technologies but it is recommended that only one type of client technology is deployed to any one desktop. So, as an end user, you will either run a Java, .NET or HTML client but not both or all on a given desktop at the same time. Note that you may be able to switch between client technology types based on your WebConnect logon user identification if your WebConnect Administrator has configured such support for you. In general, most client populations will run the same underlying client technology.

Another way of viewing the client technology choice is whether a persistent or non-persistent communications channel (socket connection) is required or desired. A client is an application program and executed within a browser interface. Because most of the application user interface is provided by the browser, Java and .NET

clients are fairly small in size, cross platform compatible, and highly secure. Their persistent applet TCP/IP connection offers the full range of mainframe updates, such as unsolicited data writing.

The **HTML client** is a program written in Java Script and executed within a Java Script capable browser interface. The underlying HTML protocol provides a non-persistent access method which is more suited to request/response oriented applications. Your WebConnect Administrator has determined which WebConnect client to use based on the network environment, the browser used, and the features that are needed.

Browser Environment and Java Support

When you are using WebConnect clients as Java applets, the browser version used in selecting an applet package is important. Different browsers and browser versions support different Java features. A Java Virtual Machine (JVM) is included with all Java-enabled browsers. With Internet Explorer 6, and Netscape 6.x, Java is SUN Java Runtime Environment (JRE). The version of the JVM dictates which Java features are supported. The level of Java support is sometimes referred to as the level of JDK (Java Development Kit) support. For example, browsers that support only JDK 1.0 features support direct printing and copy/paste features, but they require a coprocess to accomplish the tasks.

Identifying the Client Type

If you are not sure what client type you are running, it is best to contact your WebConnect Administrator or help desk. However, the following may help you determine which client type has been configured for you and allow you to determine which chapters within this user manual apply to your specific client type.

Identifying client type by visual clues within the interface

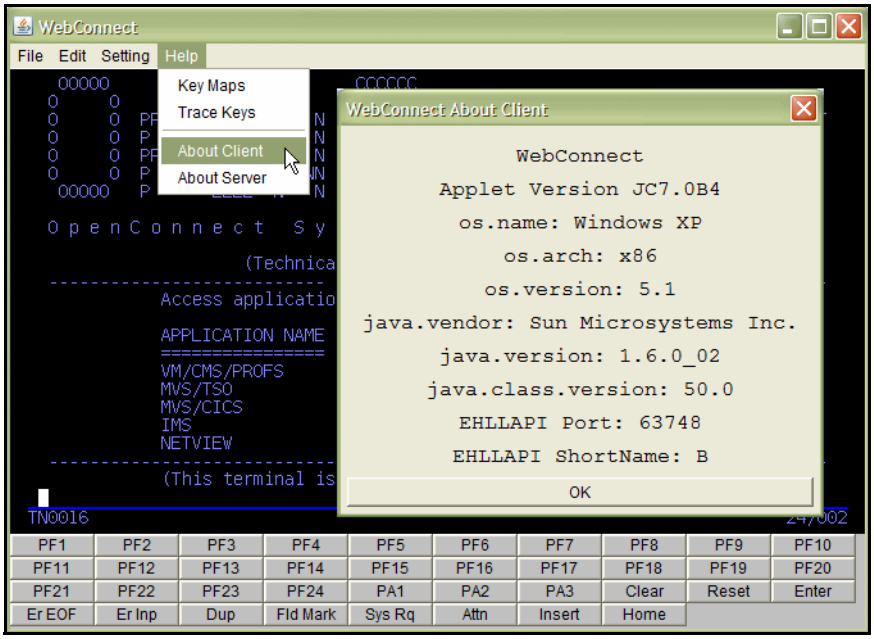


Figure 1-1: Classic Client

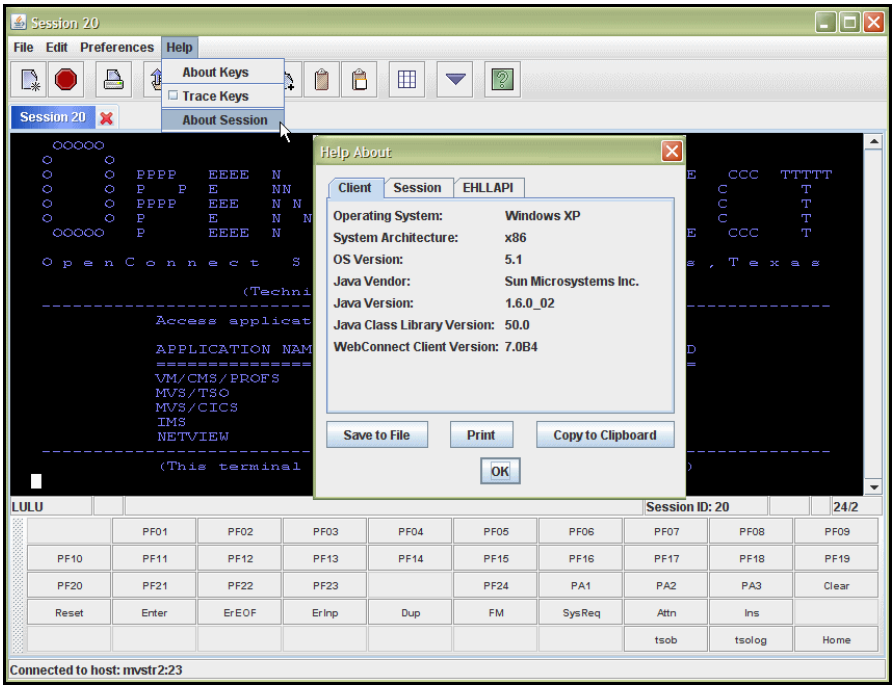


Figure 1-2: Swing Client

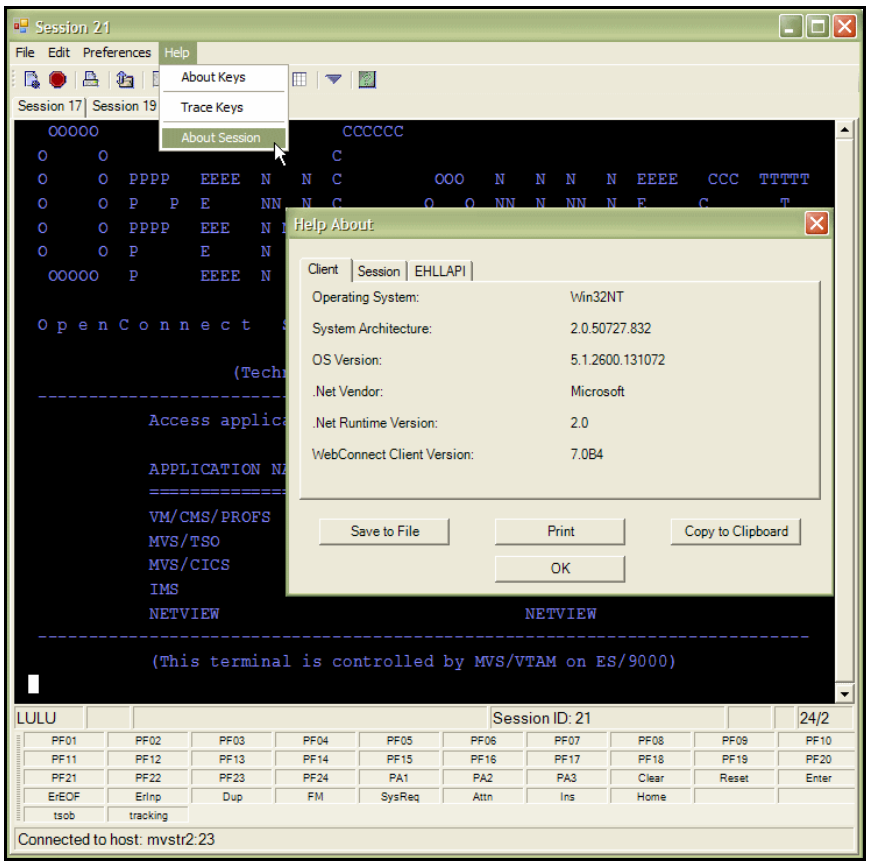


Figure 1-3: .NET Client

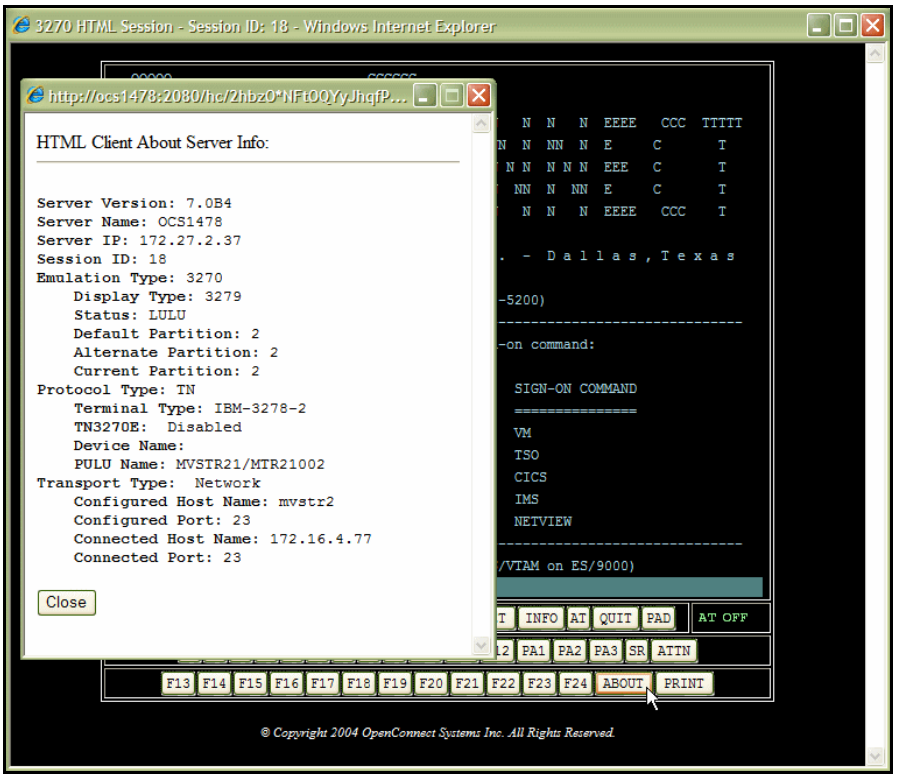


Figure 1-4: HTML Client

Network Environment

The network environment in which WebConnect is accessed and operates affects the decision to choose one applet over another, as well as whether to use WebConnect security features. WebConnect Java applets are downloaded to the browser platform the first time the client is started during a browser session. When you exit the browser, the applet no longer resides on the browser platform. This allows the administrator to maintain software and software configurations on the server while the client platform is updated. The amount of time needed to download a client emulation applet depends on the network

connection. WebConnect security features can be a necessity, depending on the sensitivity of data accessed and the security of the network used.

Security features require encryption key generation and data encryption and decryption. The security feature decision is based on speed versus security. If an end user is using the corporate intranet and not accessing sensitive data, RSA or SSL might not be required. If an end user is using the Internet and accessing sensitive corporate data, security must be a high priority.

Browser Support

WebConnect operates on the following browsers:

- Swing client requires Java 1.5+ and an approved WebConnect browser that supports Java such as IE, FireFox, or Netscape.
- .NET client requires Microsoft .NET Framework 2.0, J#2.0 Redistributable Package, .NET Security Policy, IE 6/7.
- .NET client requires IE 7.0 using SSL (https) to have **Do not save encrypted pages to disk** option unchecked in Security section of Advance tab under Internet Options. **Tools>Internet Options>Advance>Security>Do not save encrypted pages to disk**
- HTML Client requires a browser that includes “cascading style sheets or layers” (Netscape 6.x+ or IE 5.0+ or Safari 1.0.2 or 1.2).
- Classic Applets require a browser that supports Sun's Java Dev. Kit 1.1
- Netscape - Netscape Navigator Version 7.0+ with JRE 1.4.1+
- MSIE - Microsoft Internet Explorer Version 5.0.1+ with JVM Build 3802 or greater.
- SUN - JRE 1.4.1+ (Java Runtime Environment) with Java 1.5
- SAFARI - Safari 1.02 & 1.2 w/JDK 1.4.2

SFile Access Authority

Some WebConnect features require additional security measures because the applet must access local system resources. Security is provided by certificates that are included with the applets and verified by the browser. When the browser attempts to execute the applet, it encounters a certificate delivered with the applet that details the developer of the applet and the local file system access required. The browser then displays a window prompting the user to choose whether to grant the local file system access. If the user chooses to trust the applet by granting the access, the applet begins and all functionality becomes available for use. The user can grant the privileges on a temporary or permanent basis. If privileges are granted temporarily, future applet sessions require the user to grant privileges again. If privileges are granted permanently, subsequent downloads and use of the applet automatically grants privileges. The certificate and privileges can be removed from the browser under the Security or Certificates section of the browser. The following WebConnect features require access to the local resources:

The ability to write to the disk and store user configuration files for key maps, color maps, etc.

- The ability to use the local print spooler for “print screens” and 3287 print.
- The ability to access the local clipboard for copy and paste functionality.
- The ability to access the local file system to retrieve and store files for file transfer operations.

2 Using WebConnect

The SESSIONS panel, shown in Figure 2-5, is the initial user panel displayed by WebConnect and provides access to pre-configured sessions, user-configurable preferences, settings, and other components implemented by your System Administrator.

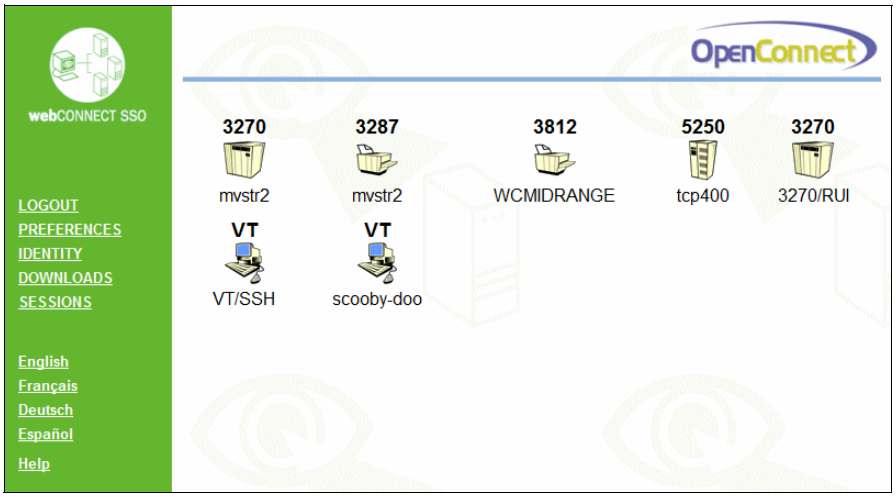


Figure 2-5: SESSION Panel Default View

Configuration settings made by the WebConnect Administrator affect the appearance of the end user interface. If your Administrator has enabled support for *Session Folders* for example, the SESSIONS panel could look similar to Figure 2-7. Refer to following section, ”Session Folders” on page 27, for more information about session folders.

Session Folders

The Session Folders feature allows the WebConnect Administrator to organize session icons into logical groups. Session folders are stored at the server level and can be shared by all users. The Administrator also specifies the default starting folder.

Session Folders can be viewed in Icon or List mode. Refer to ”Preferences” on page 30 for details about these settings.

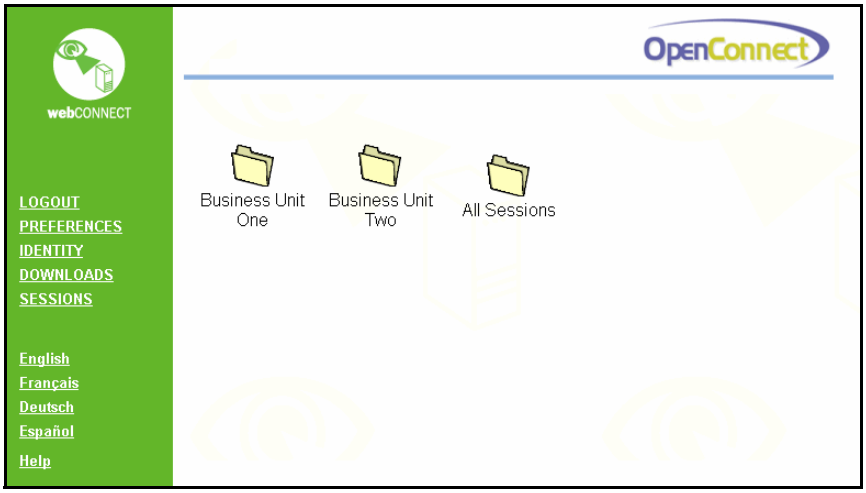


Figure 2-6: SESSION Panel Folders Enabled View

Note: To view all of the session icons that are contained in all of the folders simultaneously, simply click on the **All Sessions** folder.

Navigation

Session folders are navigated in much the same manner as folders are in Windows. Clicking on a folder icon opens a view of the sessions contained in that folder similar to Figure 2-7, on page 29. The folder name is displayed at the top panel, followed by the folder description, if any.

The first icon on the left which is marked with the diagonal arrow, as shown in Figure 2-7, on page 29 allows the user to return to the main folder list when clicked. Clicking on any session icon within a folder starts that session in the normal manner.

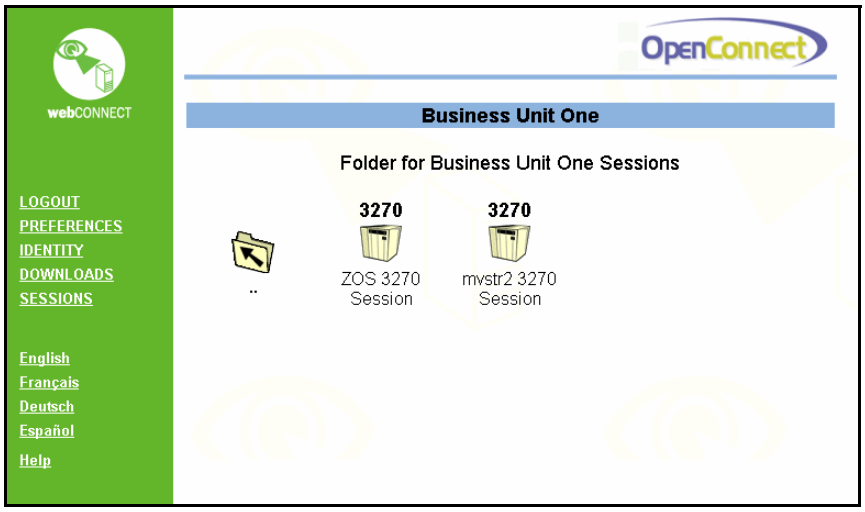


Figure 2-7: SESSION Folder

User Menu

The user menu is located on the left side of the user window as shown in Figure 2-5. The menu contains the following options:

LOGOUT

Logs the current user out and displays Login screen.

PREFERENCES

Select from the user preferences made available by the WebConnect administrator.

IDENTITY

If your administrator has enabled authentication, IDENTITY displays in the menu list as shown in Figure 2-5, on page 27. You can select it and change your WebConnect password. For more information about passwords see ”Password Management” on page 34.

DOWNLOADS

Select additional WebConnect components to download and install. See Chapter 3 for more information about downloads.

SESSIONS

Select from various WebConnect administrator configured emulation sessions. For more information about the Session Panel and emulation clients, see Chapter 4, "Classic Client Sessions" , Chapter 9, ".NET Client Sessions," Chapter 14, "Swing Client Sessions," Chapter 19,"HTML Client Emulation."

Display Language

To change the display language, click the desired language on the user menu, as shown in Figure 2-8. The choices are English, French, Dutch, and Spanish. The display language automatically changes to the selected language.

HELP

Displays the WebConnect User’s Guide in PDF format.

Preferences

Click PREFERENCES on the menu and the window shown in Figure 2-8 appears. Individual user configurable options can be set from this window.

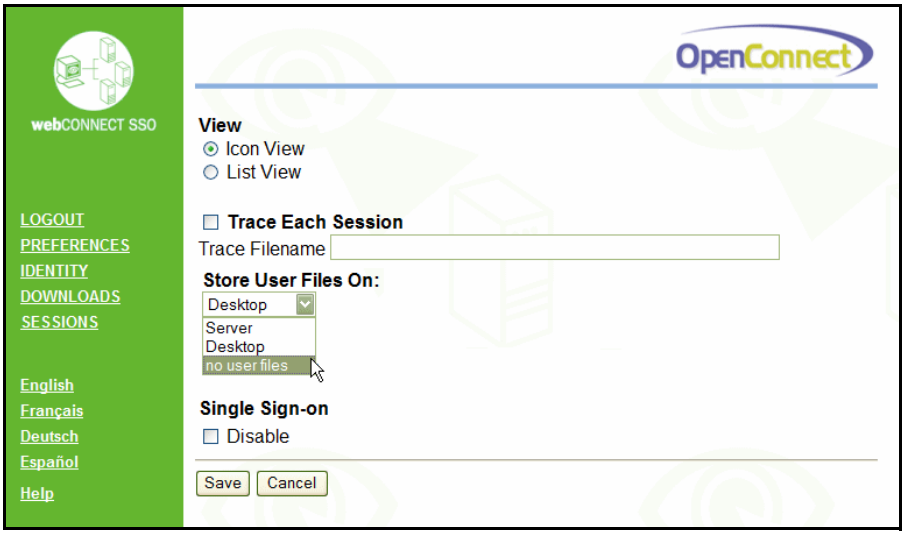


Figure 2-8: .NET Client PREFERENCES Window

Note: Features available from the PREFERENCES window have been defined by the system administrator and may not include all of the options discussed and shown here.

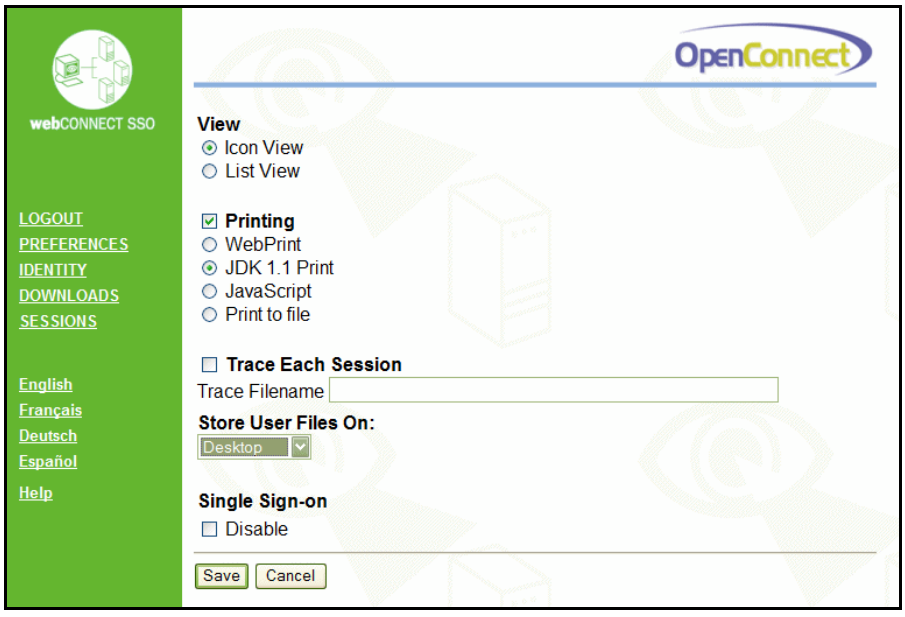


Figure 2-9: Swing Client PREFERENCES Window

View

Select **PREFERENCES** from the user menu, shown in Figure 2-5, to set one of the following view options:

Icon View

Display session type and session name in the SESSION panel with *large* icons.

List View

Display session type and session name in the SESSION panel in a list format with *small* icons.

Printing

Click the **Printing** checkbox and choose a print method from the following options:

WebPrint

For complete information see Chapter 5,"Classic Client Printing." Not applicable to .NET client.

JDK Print solution

Uses the built-in Java solution. No additional installation is required. Not applicable to .NET client.

JavaScript print option

Print to a browser window where the browser print facilities are invoked to send the output to the printer. JavaScript printing does not support formatting controls, such as font size or character spacing view. Not applicable to .NET client.

Print to File

Print to a file on the local machine. Select print and a dialog box displays the file you are printing to and the following options:

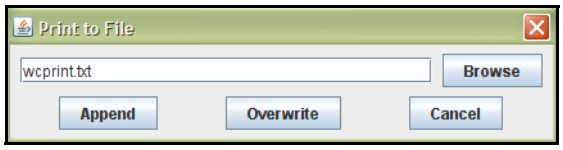


Figure 2-10: Print to File Dialog

- ***Browse*** to select another file
- ***Append*** to append the current print job to a selected file
- ***Overwrite*** prints only the current job to the file (erasing the contents of the previous file)
- ***Cancel*** to abort the print job

The data in the file is “text only” with no attributes. Character encodings are converted to the platform default, see Figure 5-31, on page 73.

Windows Print

Windows Print uses standard Windows print functionality applicable only to .NET client.

Trace Each Session

When technical difficulties occur with user sessions, a Help Desk Representative may instruct you to do a trace. If this situation occurs, these trace files are extremely helpful in diagnostic troubleshooting.

1. Select **PREFERENCES** from the user menu. See Figure 2-5, on page 27.
2. Check the **Trace Each Session** check-box before opening any sessions. By checking this box, you create a trace for every session you start.

If your Help Desk Representative provides a filename, you can type it in the **Trace Filename** box. However, you should not enter a filename unless you are specifically instructed to do so.

Note: Users should reset (deselect) the “Trace Each Session” feature on the Preferences window after tracing a file so that traces do not continue to collect in the traces directory.

Store User Files On:

Server

Store user files on the WebConnect server system.

Desktop

If your administrator enables this option your user files can be stored on the local machine (desktop).

No user files:

You can also choose not to store files, such as Key Maps, or Hotspots, etc.

Single Sign-On

This option only displays in your menu options if your administrator has enabled it. However, you should only disable it if you are instructed to do so by your administrator or Help Desk Representative. Refer to the *WebConnect Configuration and Administration Guide* for more information about SSO.

Password Management

If the WebConnect administrator has enabled strong passwords, the following rules and conditions apply.

Password strength is checked at logon and whenever it is changed. If the current password does not meet the required strength, you are prompted to supply a stronger password.

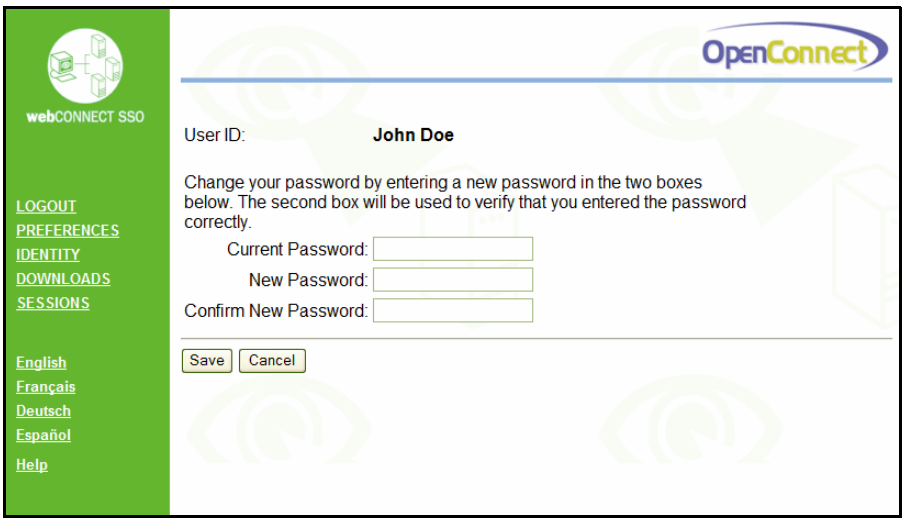


Figure 2-11: Changing your Password

Password Length and Strength

The following tests are applied to passwords to determine their strength:

Number of character classes - The password is scanned to count the number of characters in the following categories: upper case alphabetic, lower case alphabetic, numeric, and other. Due to common usage patterns, an upper case alphabetic at the start of the password or a numeric at the end does not count toward the number of distinct classes found.

Password length - The minimum length of a password is coupled to the number of character classes found in the password. A password with 3 or 4 classes requires a minimum length of 8 characters. One with only 2 classes requires a minimum of 24 characters. The maximum allowed length is 80 characters.

Similarity to userid - A portion of the user's id cannot be used within a password. A 4 character or better match is considered similar. A reversed character sequence can also qualify as a match if 4 characters or more.

Similarity to prior password - When changed by the end-user, the current password is required as part of the change process. The new password is checked for similarity to the old password. A 4 character or better match is considered similar. A reversed character sequence also qualifies as a match if 4 characters or more.

Dictionary - The password is checked against a 4096 entry dictionary of common words.

Password History

In addition, the password history mechanism precludes reuse of the current or 5 prior passwords.

Password Examples

Character classes

The password “Abcd+++efg1” would appear to have 4 classes at first (upper case, lower case, numeric, other) but the upper case “A” and the numeric “1” don't count since they are at the start and end. This password is considered to have only 2 classes. The password “abcd+1+Efg+” counts for all four classes since the upper case and numeric are in the body of the password.

Similarity to user id

The password for userid “tester” cannot contain any substring of four characters or more of “tester”. The password “esteA1234+” is not valid since it contains the substring “este” from “tester”.

Similarity to prior password

The new password “abc0123XYZ&” cannot be used to replace password “MNO0123qrs*” since it contains the substring “0123” from the old password.

Dictionary

The dictionary contains the word “gene”, invalidating password “gene01ABCD+”.

Character Limitations for Passwords and User Names

The following special characters should not be used in either Passwords or User Names:

Table 2-1: Invalid Characters

Name	Character
Ampersand	&
Angle Brackets	< >
Asterisk	*
BackSlash/Slash	\ /
Brackets	[ ]
Colon	:
Coma	,
Double Quotation	"
Pipe	|
Plus Sign	+
Question Mark	?
Semicolon	;
Equals	=
Parenthesis	()
Curly Braces	{}
Single Quotation	’

3 Downloads

The Downloads panel contains links to several additional components for WebConnect.

- ”Installing WebPrint” on page 40**.** WebPrint provides advanced printing capabilities for WebConnect applets.
- ”Installing the WebConnect Emulation API Package” on page 41**.** The WebConnect Emulation API Package provides COM (ActiveX) object API and EHLLAPI capabilities for WebConnect applets. Refer to the *WebConnect Com Object Guide* and the *WebConnect EHLLAPI Reference Guide* for more information about the WebConnect Emulation API Package.
- ”Downloading .NET Components” on page 41.
- ”Installing WebConnect Desktop Emulator” on page 44. The WebConnect Desktop Emulator provides a Windows application to access WebConnect Emulation Sessions without use of a web browser. See Chapter 20, "Desktop Emulator" for more information about the WebConnect Desktop Emulator.

Downloads with Java Runtime Environment (JRE)

When you select DOWNLOADS from the user menu and JRE is enabled, the following window displays. For more information about JRE, see ”Browser Environment and Java Support” on page 21.

webCONNECT
LOGOUT
PREFERENCES
IDENTITY
DOWNLOADS
SESSIONS
English
Français
Deutsch
Español
Help
OpenConnect
webPRINT
WebPrint provides advanced printing capabilities for WebConnect Java applets. Those capabilities include control of the printer dialog, improved printer resolution, and the support of host formatted data for 3287 and 3812 emulation types. This package must be installed on the user's desktop.
Install WebPrint
comOBJECT
WebConnect Emulation APIs provide COM (ActiveX) object API and EHLLAPI capabilities for WebConnect applets. This package must be installed on the user's desktop.
Install WebConnect Emulation API Package
webCONNECT
WebConnect Desktop Emulator provides a standalone emulation client that may be installed on the user's desktop. It allows access to emulation sessions without the use of a web browser.
Install WebConnect Desktop Emulation Package
Java
Oracle Java Runtime Environment
Download Oracle Java Runtime Environment

Figure 3-12: User Downloads with JRE

Installing WebPrint

Complete the following steps to install WebPrint.

1. Click DOWNLOADS on the user menu.
2. Click **Install WebPrint** as shown in Figure 3-12 above.

   The Install WebPrint for Java window displays OCWebPrint.exe, a zipped, self-extracting, executable file.
3. Click **Download**.
4. You are prompted to choose the download path on your system, and OCWebPrint.exe is saved to the path selected.
5. Execute OCWebPrint.exe from the saved location and follow the prompts to install WebPrint.
6. You must close and restart your Web browser to invoke the installation.

Uninstall WebPrint

To uninstall WebPrint see the windows control panel.

Select **Start>Settings>Control Panel>Add/Remove programs** and follow the prompts to uninstall WebPrint.

Installing the WebConnect Emulation API Package

Complete the following steps to install WebConnect Emulation API Package.

1. Click **DOWNLOADS** In the SESSION panel, the DOWNLOADS window displays.
2. Click **Install WebConnect Emulation API Package** to open the installation window.
3. Click **Start Download**.
4. Choose to save to disk and designate where to save wcemuapi.exe.
5. Terminate all WC 3270/5250 sessions.
6. Execute wcemuapi.exe and follow the prompts to install WebConnect Emulation API Package.
7. Start your 3270/5250 sessions

Uninstall the WebConnect Emulation API Package

1. To uninstall see the windows control panel.
2. Select **Start>Settings>Control Panel>Add/Remove programs** and follow the prompts to uninstall WebConnect Emulation API Package.

Downloading .NET Components

All of the files supporting the .NET client are available under the User Interface Menu>Downloads page.

The *WebConnect .NET Security Policy Deployment Package* is required along with two Microsoft packages to provide the runtime environment of the WebConnect .NET client. The Microsoft packages are:

- *.NET Framework 2.0*
- *J# 2.0*

Each system hosting an application must have its .NET Framework runtime security policies configured to define the proper .NET Framework applications permissions.

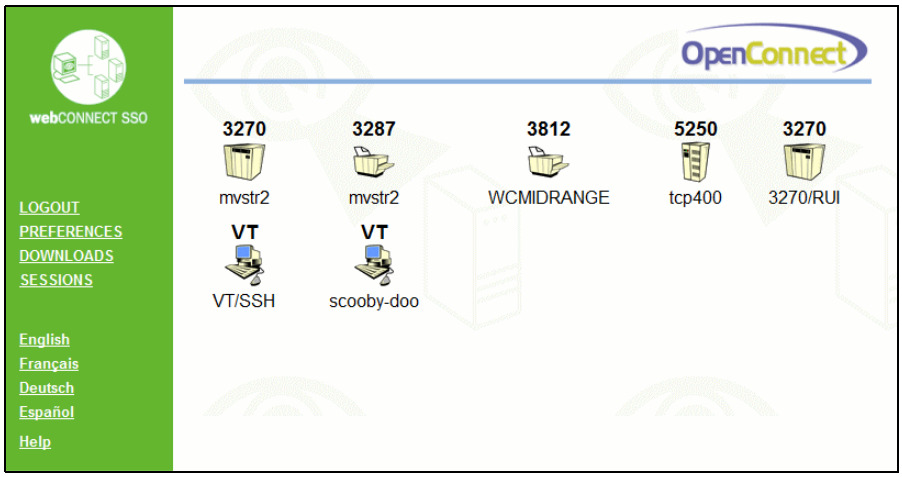


Figure 3-13: User Menu

1. Select **Downloads** from the User Menu as shown in Figure 3-13.
2. Select **Download required .NET components** from the bottom of the Downloads page as shown in Figure 3-12, on page 40. The following page appears:

webCONNECT SSO
LOGOUT
PREFERENCES
DOWNLOADS
SESSIONS
English
Français
Deutsch
Español
Help
OpenConnect
Install Required .NET Components
To install the .NET 2.0 Framework for 32-bit Windows on your workstation:
Download dotnetfx.exe
Close all Internet Explorer windows.
Run dotnetfx.exe to install the .NET 2.0 Framework
Start Download
To install the J# 2.0 Package on your workstation:
Download vjredist.exe
Close all Internet Explorer windows.
Run vjredist.exe to install the J# 2.0 Package
Start Download
Note: For further information regarding .Net and J#, including 64 bit support, please refer to www.microsoft.com.
To install WebConnect .NET Security Policy Deployment Package on your workstation:
Download WebConnectRuntimeSecurityPolicy_DotNet.msi
Close all Internet Explorer windows.
Run WebConnectRuntimeSecurityPolicy_DotNet.msi to install the security policy
Start Download
Cancel

Figure 3-14: .NET Components

3. Install the components in the order of the instructions presented as shown in Figure 3-14 above.

Note: WebConnectRuntimeSecurityPolicy_DotNet.msi will not provide any indication that it has completed.

Downloads with Desktop Emulator Enabled

When you select DOWNLOADS from the user menu and the WebConnect administrator has enabled *download* of the desktop emulator, the download page includes the WebConnect Desktop Emulator section as seen in the following display.

webCONNECT
LOGOUT
PREFERENCES
IDENTITY
DOWNLOADS
SESSIONS
English
Français
Deutsch
Español
Help
OpenConnect
webPRINT
WebPrint provides advanced printing capabilities for WebConnect Java applets. Those capabilities include control of the printer dialog, improved printer resolution, and the support of host formatted data for 3287 and 3812 emulation types. This package must be installed on the user's desktop.
Install WebPrint
comOBJECT
WebConnect Emulation APIs provide COM (ActiveX) object API and EHLLAPI capabilities for WebConnect applets. This package must be installed on the user's desktop.
Install WebConnect Emulation API Package
webCONNECT
WebConnect Desktop Emulator provides a standalone emulation client that may be installed on the user's desktop. It allows access to emulation sessions without the use of a web browser.
Install WebConnect Desktop Emulation Package
Java
Oracle Java Runtime Environment
Download Oracle Java Runtime Environment

Figure 3-15: User Downloads with Desktop Emulator

Installing WebConnect Desktop Emulator

Complete the following steps to install the WebConnect Desktop Emulator.

1. Click **DOWNLOADS** on the user menu.
2. Click Install WebConnect Desktop Emulation Package as shown in Figure 3-15 above.

The Install WebConnect Desktop Emulator window displays WCDesktopApp.msi, a standard Windows Installer file.

3. Click **Start Download**.
4. You are prompted to run or save the installer file. Either execute the installer directly from the browser via the Run button or save the installer file and then execute from the saved location.

5. Follow the installation prompts to install the Desktop Application. You will need appropriate values for the portal configuration during the installation. These values will be provided by your WebConnect administrator.

4 Classic Client Sessions

The **SESSION panel**, shown in Figure 4-16, is the initial user window displayed by WebConnect and provides access to pre-configured sessions, user-configurable preferences, settings, and other components that have been implemented by your System Administrator.

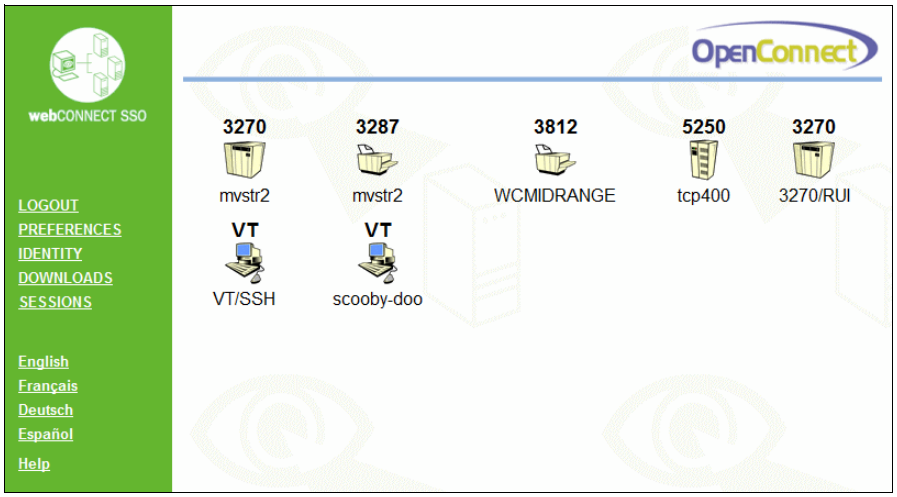


Figure 4-16: SESSION Panel

To initialize a session, click a session type icon in the **SESSION panel**. The emulation session opens in a separate window.

Controller Applet

If the WebConnect Administrator has enabled the *Session Controller Applet* feature, clicking on a *session type icon* in the SESSION panel of the HTML user interface opens a controller applet window followed by the emulation session itself. Figure 4-17 shows a Session Controller Applet with several sessions open.

> **Note:** Do not use Pop-up Window Blockers as they can prevent the JRE placeholder window from starting. Disable all Pop-up Window Blockers

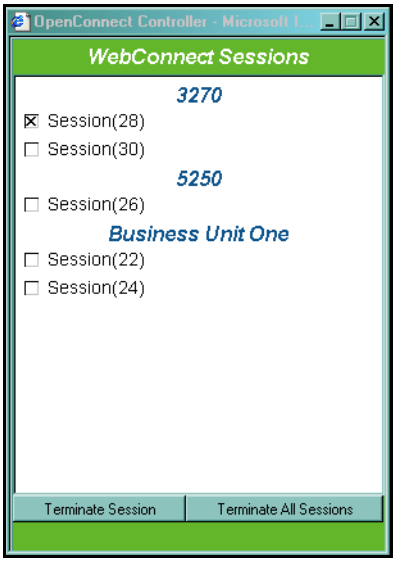


Figure 4-17: Session Controller Applet

The controller applet provides the means to manage multiple open sessions. It displays a list of all active sessions, grouped by default into emulation types and identified by their session ID number. If Session Folders are enabled folder names are used. Your WebConnect administrator can also specify custom group names.

Clicking a session in the controller applet's session list brings that session window to the foreground. Sessions that have been terminated due to network conditions or by the WebConnect Server are listed in red. Sessions can also be individually or collectively stopped by using the **Terminate Sessions** or the **Terminate All**

Sessions buttons. Figure 4-17 shows the Controller Applet with several sessions open. The first session in list, the 3270-session number 28, is marked for termination.

The controller applet also eliminates the need for the matching HTML window necessary to avoid the premature closing of a session by the JRE.

3270, 5250, and VT Client Emulation Features

The 3270, 5250, and VT client emulation applets have similar user interfaces and share many interface features. The client window has a Menu Bar, an Emulator Screen Toolbar, a Macro Toolbar, an Emulation Space, and an optional ClickPad as shown in Figure 4-18 below.

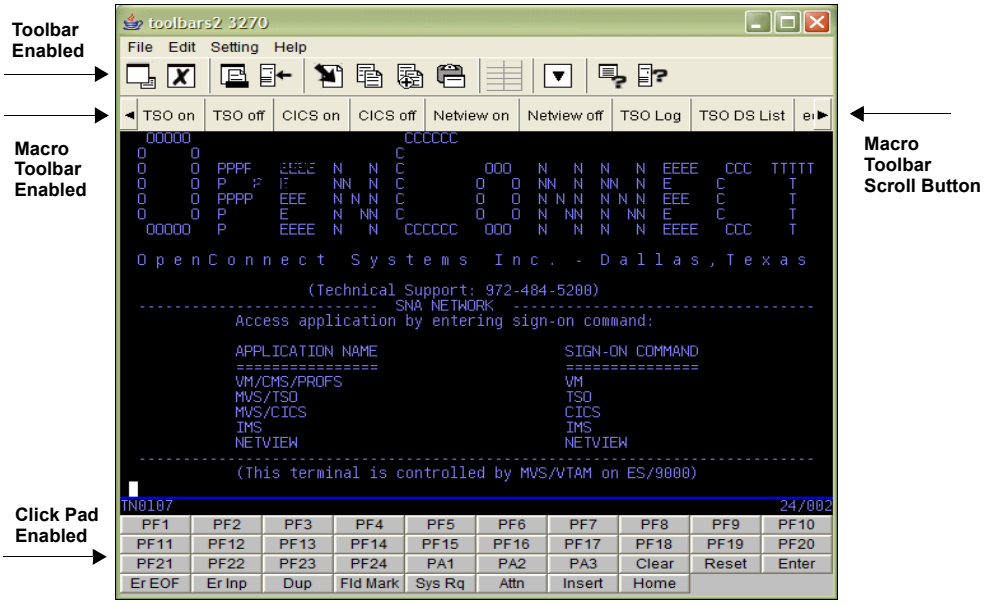


Figure 4-18: Client Window

Menu Bar

Your administrator can enable different menu options for your user ID; therefore, all of the following functions may not be visible (3270, 5250 and VT) on your Menu Bar.

Table 4-2: Session Menu Options (Sheet 1 of 2)

Menu	Definition
File	**New**—opens a new session. If the *session controller applet* is enabled, the **File>New** option is unavailable. In that case new sessions must be started from the main sessions panel of the user interface. **Print Screen**—prints the current screen. **Log Session to Printer**—while enabled text displayed on the VT session is echoed to the printer. **Log Session to File**—while enabled text displayed on the VT session is echoed to a file. **Assoc Print Session**—activates a user's print option. **Macro Rec/Play**—Play Macro (Stop Macro), Record Macro, Stop Recording, Cancel Recording, Delete Macro, and Save Macro. **Save User Settings**—saves the user's settings to the desktop. **File Transfer**—transfers files between a Java client and an SNA host. **Exit**—closes the emulation window and exits the session.
Edit	**Copy**—copies highlighted text from the screen to the clipboard. **Copy and Append**—copies and appends (adds) data to the clipboard without destroying existing clipboard data. **Paste**—paste the copied text from the clipboard to the highlighted area of the window. **Select All**—selects the entire screen to be copied and pasted.
	Preferences—Opens the following menu options: **Key Maps**—edit the Key Maps for this session. **Hot Spots**—edit the Hotspots for this session. **Colors**—edit the Colors for this session. **Attributes**—edit the Attributes for this session. **Startup Macro**—edit the Startup Macro for this session. **Macro Toolbar**—configure the Macro Toolbar for this session.

Table 4-2: Session Menu Options (Sheet 2 of 2)

Menu	Definition
Setting	**Font Size—window resize (7-24)** to choose different font display sizes. **Click Pad**—turn the ClickPad at the bottom of the session window on and off (view/hide). **Block Paste**—default paste mode used to toggle between block and stream modes. Paste an entire block of vertical or columns of text. **Hot Spots**—activate hot spots on the window. **Toolbar**—activate the Toolbar under the Menu Bar. **Macro Toolbar**—activate the Macro Toolbar beneath the Toolbar. **Cursor to Mouse**—position cursor using the right mouse button. **Type-ahead**—enter the next string of host information into a buffer without waiting for the next host screen (Reset/Disable set buffer size). **Suppress Trailing CR for Copy**—removes last CR from copied text. **Cursor—**set cursor options: Underscore Cursor, Blinking Cursor, Rule Lines, Horizontal Rule, Vertical Rule, Short Rules, Blue, Red, Pink, Green, Turquoise, Yellow, White. **Show Printer Dialog—**ON/OFF **Lock Backspace**—ON/OFF **Save Window Position/Size on Exit** (ON/OFF) **Initial Window State** (JRE ONLY) change to Normal, Iconified, or Maximized window settings (requires restarting session). **Proxy Server**—allows setting to connect to a proxy server. **EHLLAPI**—spawns EHLLAPI configuration window. Check Enable to allow EHLLAPI and COM programs to interact with the WebConnect applet. EHLLAPI supports up to a maximum of 26 concurrent sessions and uses ports incrementally starting from 63747. See Figure 4-19 below.
Help	Open Help File

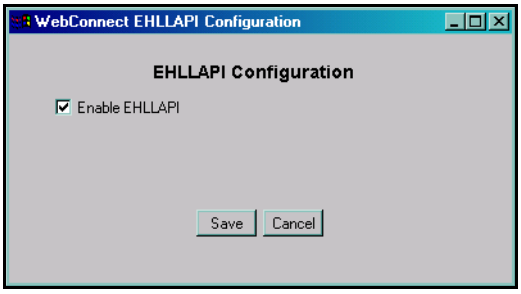


Figure 4-19: EHLLAPI Configuration Window

Macro Toolbar

The Macro Toolbar must be enabled by your administrator. You can toggle it ON/OFF under **Settings>Macro Toolbar** on the client window menu bar. See Table 4-2 on page 51.

To configure the contents of the Macro Toolbar complete the following steps:

1. Click, **Edit>Preferences>Macro Toolbar**. The Macro Toolbar Configuration window appears as shown below in Figure 4-20.

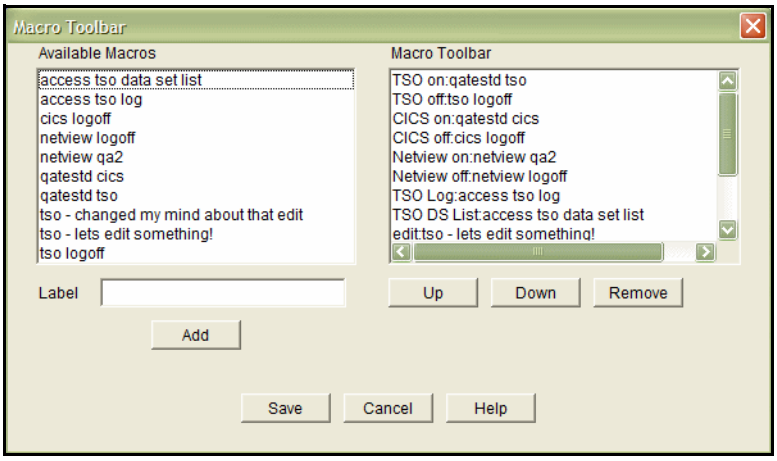


Figure 4-20: Macro Toolbar Configuration Window

Table 4-3: Macro Toolbar Details

Item	Definition
Available Macros	The list of Macros available to the user.
Macro Toolbar	The Macros that appear on the toolbar.
Label	A unique descriptive name for the macro.
Up	Move the selected macro up the list.
Down	Move the selected macro down the list.
Remove	Delete the selected macro from the list.
Add	Add the macro selected in the Available Macros list to the Macro Toolbar list.
Save	Save your changes.
Cancel	Cancel the previous input.
Help	Open Help.

2. Select the desired macro from the list of **Available Macros** on the left.
3. Assign another label to the macro by entering it into the **Label** box if desired.
4. Click **Add**.

   The macro will now appear in the **Macro Toolbar's** list on the right of the dialog box.
5. Change the position of the macro in the list by selecting a macro and using the **Up** and **Down** buttons.
6. Remove a macro from the **Macro Toolbar's** list by first selecting the macro and then clicking **Remove**.
7. Save your changes by clicking **Save**.

Session Toolbar Menu

The Sessions Toolbar menu must be enabled by your administrator. You can toggle it ON/OFF under the Setting menu on the client window menu bar.

Table 4-4: Emulation Icon Values (Sheet 1 of 2)

Icon	Definition
	New Session—Opens a new session emulation screen.
	Exit Session—Exits the present session without saving information.
	Print Screen—Sends the emulator screen to a print session.
	File Transfer—Transfers files between a Java client and an SNA host application using standard IND$FILE transfer protocol.
	Select All—Highlights the entire screen.

Table 4-4: Emulation Icon Values (Sheet 2 of 2)

	Copy—Copies highlighted areas of the screen to the clipboard.
	Copy and Append—Used to copy and append (add) data to the clipboard without destroying the existing data that is already on the clipboard. *Use the Left mouse button to identify (highlight) text you want to copy.*
	Paste—Copies data from the clipboard to the highlighted area on the screen.
	ClickPad—Turns the ClickPad (PF Keys) at the bottom of the screen on and off.
	Play Recorded Macro—Displays a list of previously recorded macros and allows you to select one to play.
	About Client—Displays detailed information about the client machine, browser, and version of WebConnect Client.
	About Server—Displays detailed information about the WebConnect server and current emulation session (version, name, IP address, port, etc.).
	Macro Toolbar Scroll—Scrolls the list of macros on the toolbar left or right.

Emulation Space

The Emulation Space, located below the Menu and Tool bars, displays detailed messages of the WebConnect server and the host connections. If encryption is used, messages regarding encryption key generation also displays in the emulation space. After a host connect is established, host data displays in the emulation space according to host data attributes, unless the Hot Spots option is active. See ”Configuring Hot Spots” on page 88.

ClickPad

The ClickPad displays below the Emulation Space if enabled as shown in Figure 4-18, on page 50.

Copy and Paste Features

The copy/paste feature can be set for either *block* (copy/paste selected columns) or *stream* (copy/paste rows) mode by setting the Block Paste option under the Setting menu. By default, this setting is block mode enabled. If disabled, the data is copied in stream mode.

Copy

To copy text to the clipboard, complete the following steps:

1. Mark the text by using one of the following copy methods:
   - **Select All** from the Edit menu: Selects the current screen and the entire contents of the scroll buffers.
   - Highlighting text using a mouse: Click and hold the left mouse button at the beginning of the text you want to copy. Drag the cursor to highlight the entire text you want to copy.
   - Highlighting text using the keyboard: Position the cursor at the beginning of text you want to mark and then use the key sequences in Table 4-5.
   - Double left mouse to select entire field.
2. Select **Copy** from the **Edit** menu or toolbar. The text is copied to the clipboard.

   You can use certain keys to highlight text on the screen, as defined in the following table.

Table 4-5: Keyboard Mapping

Key Sequence	Mapping
Shift + Left	Highlight the text to the left of the current select location.
Shift + Right	Highlight the text to the right of the current select location.
Shift + Up	Highlight the text above the current select location.

Table 4-5: Keyboard Mapping (Continued)

Key Sequence	Mapping
Shift + Down	Highlight the text below the current select location.
Shift + Home	Highlight the text to the beginning of the row of the current select location.
Shift + End	Highlight the text to the end of the row of the current select location.
Shift + Page Up	Highlight the text from the current cursor position to the first row on the screen.
Shift + Page Down	Highlight the text from the current cursor position to the last row on the screen.

These sequence functions are described below.

- Shift + Left: This marking function uses the shift key and left arrow key combination. If no text is selected, the current cursor position is selected. Otherwise, the character position to the left of the last selected character position becomes the new last character selected in the block. If the last selected character position is the beginning of a row, the last character of the previous row becomes the new last character selected.
- Shift + Right: This marking function uses the shift key and right arrow key combination. If no text is selected, the current cursor position is selected. Otherwise, the character position to the right of the last selected character position becomes the new last character selected in the block. If the last selected character position is the end of a row, the first character of the next row becomes the new last character selected.
- Shift + Up: This marking function uses the shift key and up arrow key combination. If no text is selected, the current cursor position and all characters up to but not including the character above the current cursor position is selected. Otherwise, the character position above the last selected character position becomes the new last character selected in the block. If the last selected character position is in the first row, the first character on the screen becomes the new last character selected. If Shift + Up is followed by a Shift + Down, the new last character selected is the position that was selected prior to the Shift + Up.
- Shift + Down: This marking function uses the shift key and down arrow key combination. If no text is selected, the current cursor position and all characters up to but not including the character below the current cursor position is selected. Otherwise, the character position below the last selected character position becomes the new last character selected in the block. If the last selected character position is in the last

row, the last character on the screen becomes the new last character selected. If Shift + Down is followed by a Shift + Up, the new last character selected is the position that was selected prior to the Shift + Down.

- Shift + Home: This marking function uses the shift key and home key combination. If no text is selected, the current cursor position and all characters up to and including the first character in the row are selected. Otherwise, all characters from the last selected position to the first character in the row are selected unless it is already selected. If characters are already selected, then those characters are deselected.
- Shift + End: This marking function uses the shift key and end key combination. If no text is selected, the current cursor position and all characters up to and including the last character in the row are selected. Otherwise, all characters from the last selected position to the last character in the row are selected unless it is already selected. If characters are already selected, then those characters are deselected.
- Shift + Page Up: This marking function uses the shift key and page up key combination. When used, the current cursor position and all characters up to and including the first character on the screen are selected. Any characters that were previously selected but are not in this range are deselected.
- Shift + Page Down: This marking function uses the shift key and page down key combination. When used, the current cursor position and all characters up to and including the last character on the screen are selected. Any characters that were previously selected but are not in this range are deselected.

Paste

To paste text from the clipboard to the screen, complete the following steps:

1. Position the cursor where you want to begin copying text.
2. Select Paste from the Edit menu or toolbar.

Note: You can reposition the cursor by selecting the Cursor to Mouse option in the Setting menu. Then click the position where you want to move the cursor.

3287 Client Emulation Features

The 3287 session user interface is a display window that shows the progress of 3287 print jobs. A few user options can affect the printed output. These options, and other interface features, are explained below.

Menu Bar

The Menu Bar allows you to perform the tasks outlined in Table 4-6 on page 59.

Session Window

The Session Window displays the following information:

- Connection Messages show details about attempts to connect to the WebConnect server and to the host.
- Security Messages

  When using encryption, messages about the generation of encryption keys are written to the 3287 session window.
- Print Job Messages report the following information:
  - The status of the print job (started or ended).
  - The number of print jobs completed.
  - The number of pages printed

The following functions are available in the 3287 emulation client menus:

Table 4-6: 3287 Menu Functions (Sheet 1 of 2)

Menu	Item	Description
File	Print	Forces print job to flush to printer (only needed under special circumstances).
	Save User Settings	Saves the current user's settings.
	Exit	Terminates the mainframe connection and quits the applet. As long as the browser is running, the applet may remain cached and may not need to be downloaded again to start a new session.

Table 4-6: 3287 Menu Functions (Sheet 2 of 2)

Menu	Item	Description
Setting	**Font Autofit**	(Not available with JavaScript printing.) Instructs the WebConnect applet to choose the font size that fits the line of print on the printed paper. This is most useful if the print session is to print jobs requiring different formats. For instance, one job may print out 80 columns and another may print 132 columns. Setting this option would allow the applet to choose a larger font for the 80 column print job.
	Raw Mode	(Not available with JavaScript printing. Only print-to-file support with JDK print in raw mode.) Enable to bypass the graphical print API, allowing printer-specific codes to be passed in the data stream and sent directly to the printer.
	Save Window Position/Size on Exit	Enable to save window position and size on exit.
	Show Printer Dialog	Available only with WebPrint. JDK and JavaScript print always shows the printer dialog. If enabled, a dialog displays when a print job is created, allowing you to change printer settings (choose a printer, select *landscape* or *portrait*, etc.) If this option is not enabled, print jobs are sent to the default printer in portrait layout.
	Proxy Server	If instructed to do so by your administrator, select this option and enter a proxy server in the dialog that appears.
Help	**About Client**	Select to view more information about the client operating system, applet version, and Java version.
	About Server	Select to view more information about the WebConnect server.

3812 Client Emulation Features

The 3812 session user interface displays a window with the progress of 3812 print jobs. A few user options can affect the printed output. These options and other user interface features are explained below.

Menu Bar

The Menu Bar allows you to perform the tasks outlined in Table 4-6.

Session Window

The Session Window displays the following information:

- Connection messages; details about attempts to connect to the WebConnect server and to the host.
- Security messages; details about the generation of encryption keys (when encryption is used), are written to the 3812 session window.
- Print Job Messages; report the following information:
  - The status of the print job (started or ended)
  - The number of print jobs completed
  - The number of pages printed

Note: See Table 4-6 on page 59 for menu options.

Macro Record/Play

You can record frequently used keystrokes and save them as macros to be activated and played back. Defined macros are either saved locally or to the server, depending on the Save User Files On setting option in your User Preferences. See ”Preferences” on page 30. Select one of the following functions from the emulation session **File> Macro Rec/Play>** menu:

- Play Macro
- Stop Macro
- Record Macro
- Stop Recording
- Cancel Recording
- Delete Macro
- Save Macro File

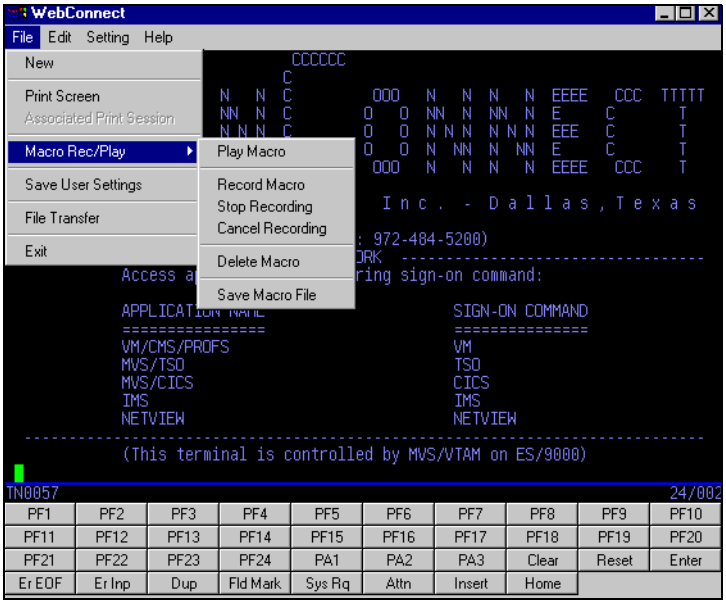


Figure 4-21: Record/Play Macro

Note: In some instances, your system administrator may have set your user preferences to restrict macro recording. If this is the case your menu will only display the “Play Macro” feature as in the following figure. The same is true for the play macro toolbar icon.

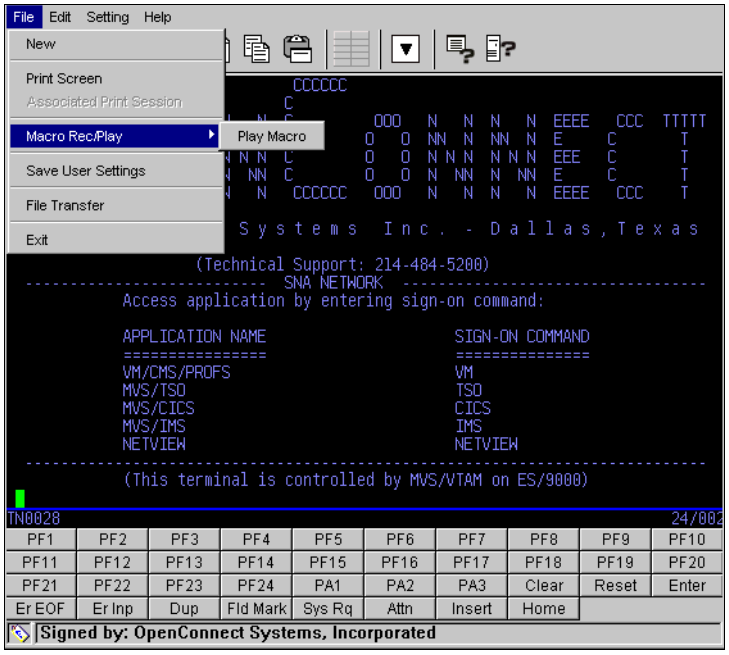


Figure 4-22: Play Macro Menu

Recording a Macro

1. From the emulation session menu, click **File> Macro Rec/Play> Record Macro**.

Figure 4-23: Record Macro Name

2. In the Macro Name box, type a name for the new macro (for example, **CICS Logon**).

3. Click **OK**.

4. Type the key sequence (i.e., the commonly used keystrokes) to record the macro.

> **Note:** Do not use the mouse or clickpad while recording. Only keystrokes can be recorded, not mouse actions. See ”Copy and Paste Features” on page 56 for instructions on using the keyboard to highlight text. For a list of the key mappings, see ”HTML Keyboard Mapping” on page 285, or select Key Maps from the emulation session Help menu.

5. When you have finished recording, click **File> Macro Rec/Play> Stop Recording**.

Figure 4-24: Stop Recording Macro

6. Click **OK**.

> **Note:** You MUST continue to the following instructions and SAVE the macro or your work will be lost.

Saving a Macro File

Immediately after recording a macro you must save it.

1. Select **File> Macro Rec/Play> Save Macro File**. The macro you recorded is saved and a confirmation message is displayed.

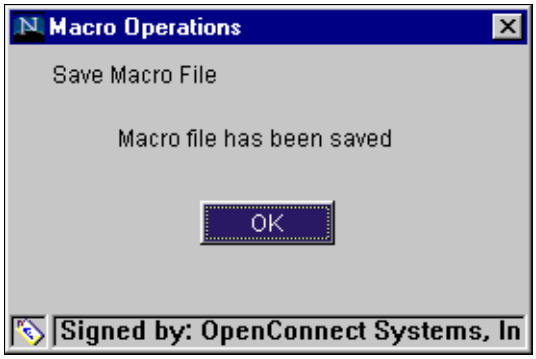


Figure 4-25: Save Recorded Macro

2. Click **OK**.
   - The macro you recorded and saved is available to replay the next time you start a session.

Playing a Macro

1. Select **File> Macro Rec/Play> Play Macro**. The **Play Macro** window opens.

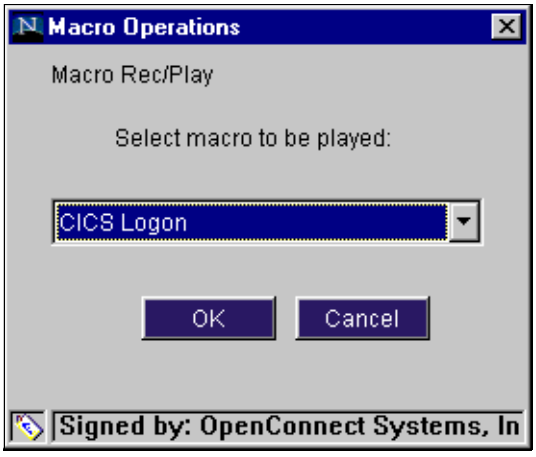


Figure 4-26: Play Recorded Macro

2. Select the name of the macro that you want to play from the drop-down menu list.

3. Click **OK**. The macro keystrokes that you previously recorded automatically play back, activating the sequence.

> **Note:** For 3270, 5250, and VT sessions you can also play a macro from the Toolbar menu items. See, Table 4-4 on page 54.

Stopping a Macro During Play

This option stops a macro while it is running.

1. During a macro playback if a long time-out occurs and you need to stop it, select **Macro Rec/Stop** and **Stop Macro.**

> **Note:** After the macro stops running, Stop Macro changes to Play Macro again.

Deleting a Macro

1. Select **File> Macro Rec/Play> Delete Macro**. The **Delete Macro** window displays.

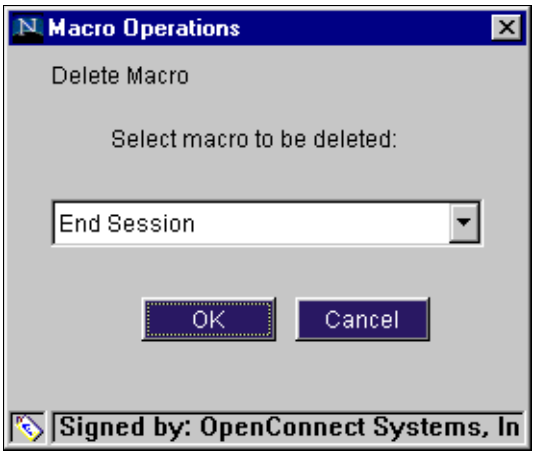


Figure 4-27: Delete Macro

2. Select the macro to be deleted from the drop-down list.
3. Click **OK** to delete the macro. A confirmation message displays.

Figure 4-28: Delete Macro Confirmation

4. Click **OK**.

5 Classic Client Printing

WebPrint

WebPrint allows full control over font size and style and automatically sizes a printed document based on display orientation.

OpenConnect's system fonts have been enhanced with custom font technology from Bitstream Inc.™

WebPrint must be installed locally on the client system. See "Installing WebPrint" on page 40.

Printing a Screen

You can print a single session window after you select a print screen option, see the following steps:

1. From the open session window, select **File>Print Screen** from the menu. The printer dialog window for the system displays. If the "Print to File" option has been configured it opens instead.
2. Follow the system printing procedures.

VT Session Logging

Activity during a VT session can be recorded in two different ways.

- Log Session to Printer - while enabled text displayed on the VT session is echoed to the printer.
- Log Session to File - while enabled text displayed on the VT session is echoed to the user selected file.

  Simultaneous logging to file and printer are not allowed.

When the user enables session logging, the applet sends a command to the WC server to start logging. The VT emulation in the server manages accumulation of log data and sends each line to be logged to the applet.

While logging, each printable character received is stored in a buffer in the WC server. The buffer is flushed to the applet for printing whenever the carriage return (CR) character is received from the host. Tab characters are expanded in the buffer for proper alignment of tabbed data in the printer log.

If host-initiated VT print (printer controller on) is started, the current logging buffer is flushed and logging suspended. Logging resumes when the print controller off sequence is received. Printer controller data is spooled to a separate print job by the applet to prevent mixing of printer controller data and session logging data.

The session logging feature uses the same applet print method configured for screen print and printer controller mode. This is configured in the session file or in the user's preferences.

VT Log Session to Printer

To use Session Logging complete the following steps from the session screen:

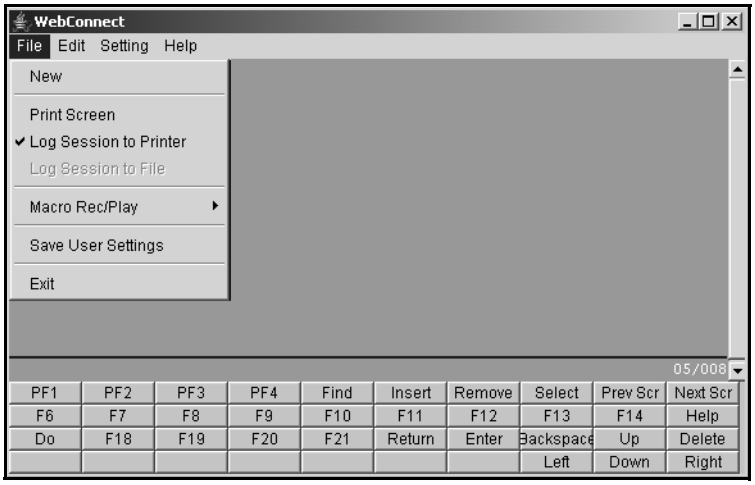


Figure 5-29: Log VT Session to Printer

1. Select **File>Log Session to Printer**

   A print dialog box appears.

2. Check the print settings, make changes as necessary, and click **OK**.

3. Continue with your session.

   Data entered is stored in the print buffer until you are ready to print.

4. To print the accumulated session activity click **Files>Log Session to Printer** again.

   Your session is sent to your selected printer and session logging is disabled.

VT Log Session to File

To use Session Logging complete the following steps from the session screen:

1. Select **File>Log Session to File**

   The Specify Session Log Filename dialog box appears.

2. Enter a filename for the session log and click **OK**.

3. Continue with your session.

   Data entered is stored in the session log file.

4. To discontinue session logging click **Files>Log Session to File** again.

3287 Print Session

Printing from any browser to a specific 3287 logical unit (LU) and gateway:

1. Select **3287 Print Session** from the *Start User Session panel*. A 3287 printer session window displays.

2. Be sure the correct gateway and LU displays in the printer session window.

3. Send a mainframe print job to the selected LU. The 3287 printer session window indicates that the session is printing.

> **Note:** To check the LU and gateway you are printing to, select About Server from the Help menu on the printer session window displayed when you start a 3287 print session. A status window will open identifying printer information, such as the number of jobs to print.
> To run print jobs unattended, disable Show Printer Dialog from the session settings menu. This is not valid for JDK printing.

3812 Print Session

You can use a 3812 print session to print an AS/400 based print job on the local or network printer. From the browser, select one of the 3812 print sessions that has been configured.

To start a 3812 print session:

1. Select the desired 3812 Print Session from the SESSION panel.

   The 3812 print session window will display.

2. If the connection fails, attempt to resolve the problem indicated by the error message. If the problem persists, try a different 3812 print session.

3. Send an AS/400 print job to the print device connected to the 3812 print session. You will find the print device name (and other important information about the session) on the About Server dialog located in the 3812 print session Help menu.

Date/Time Stamp Operation

The date/time and user@host will print in the bottom margin of all pages generated by Print Screen. The user ID and PC host name will be at the left margin in the format user@host with the date/time printed at the right margin. US systems result in a date displaying as dd-mm-yy hh:mm:ss AM/PM format, 27-Sep-02 3:35.29 PM.

jdoe@ocs5555.oc.com 27-Sep-02 3:35.29 PM

Print to File Date/Time

This method does not render the page and then print it. Instead, each string is written to the file as it is received by the Print to File class.

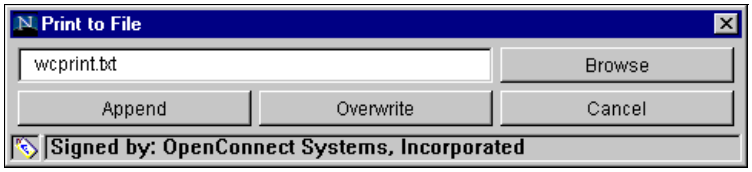


Figure 5-30: Print to File Dialog

Print date/time stamp, user ID, and PC host name will print two text lines at the top of the screen, as in the following example:

```
user1@abc.oc.com
27-Sep-02 3:35:29 PM
```

Time/Date Stamp

```
user1@abc123.oc.com
27-Sep-02 3:35:29 PM
    OOOOO                          CCCCCC
   O     O                        C
   O     O  PPPP   EEEE  N    N  C         OOO   N    N  N    N  EEEE   CCC  TTTTT
   O     O  P   P  E     NN   N  C        O   O  NN   N  NN   N  E     C       T
   O     O  PPPP   EEE   N N  N  C        O   O  N N  N  N N  N  EEE   C       T
   O     O  P      E     N  NN  C        O   O  N  NN  N  NN  N  E     C       T
    OOOOO   P      EEEE  N    N   CCCCCC   OOO   N    N  N    N  EEEE   CCC    T

   O p e n C o n n e c t   S y s t e m s   I n c .  -  D a l l a s , T e x a s

                     (Technical Support: 972-484-5200)
   --------------------------  SNA NETWORK  ----------------------------------
              Access application by entering sign-on command:

              APPLICATION NAME                    SIGN-ON COMMAND
              ================                    ===============
              VM/CMS/PROFS                        VM
              MVS/TSO                             TSO
              MVS/CICS                            CICS
              MVS/IMS                             IMS
              NETVIEW                             NETVIEW
   ------------------------------------------------------------------------------
              (This terminal is controlled by MVS/VTAM on ES/9000)
```

Figure 5-31: Print to File Time/Date Stamp

6 Classic Client File Transfer

WebConnect uses the standard IND$FILE protocol to transfer files between a Java client and an SNA host application. This capability can be used to address a variety of networking needs, including centralized data backups and data warehousing through an SNA host.

Note: The 3270 File Transfer menu option is only available if it is enabled by your administrator.

Because SNA host files use different file formats from WebConnect files and Java client files, be sure to use the appropriate options for converting files to the receiving host's file format during transfer. Format conversion allows the receiving host applications to use the file without further modification. SNA hosts and SNA applications used for transferring files are listed below as well as the IBM program number and operating system for each application:

Table 6-7: SNA Host/Application Transfer

Application Program	Program Number	Operating System
3270 PC File Transfer for CICS	5798-DQH	VS
3270 PC File Transfer for TSO	5665-311	MVS
3270 PC File Transfer for VM	5664-281	VM

- WebConnect supports only the DFT (Distributed Function Terminal) file transfer mode.

You must be familiar with the file transfer application program you use.

Select an option below for file transfer instructions:

- "Sending and Receiving CICS/VS Files" on page 76
- "Sending and Receiving TSO Files" on page 78
- "Sending and Receiving VM Files" on page 82
- "Multiple File Transfers" on page 84

Sending and Receiving CICS/VS Files

WebConnect allows file transfer between a Java client and the Customer Information Control System/Virtual Storage (CICS/VS) SNA application.

See the following steps to transfer files to and from CICS/VS.

1. Make sure that the WebConnect client is connected to the desired SNA host and CICS application.

2. From the File menu, select **File Transfer.**

   The **File Transfer** option dialog appears.

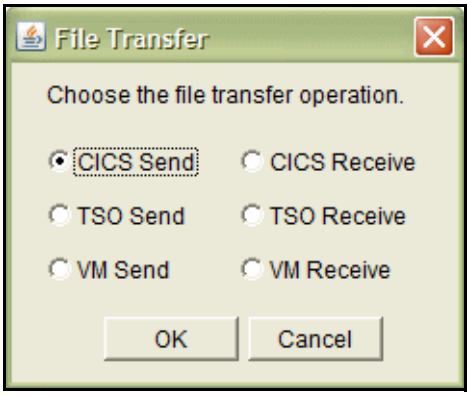


Figure 6-32: File Transfer Options

3. Select **CICS Send** (or **CICS Receive**). The appropriate file transfer window will display.

4. Under **Local File** click **Browse** to search for a file. A file selection window will display.

> **Note:** The procedures for searching for filenames will vary by system.

   When you select a file the name will display in the text field of the Local File box.

UNIX Format

1. To transfer the file in UNIX format, click the UNIX Format button under **Browse**. UNIX format converts line separators to carriage return and line feed pairs during a Send operation. During a

receive operation, carriage return and line feed pairs are converted to line separators.

Do not select the UNIX format when using the binary option or the binary data will be corrupted.

2. Type a host filename in the Data Set Name field in the Host File box.

> **Note:** The CICS filename can be a program name, a transaction identification, or identification selected by the CICS/VS application programmer. If the filename does not exist, the CICS/VS application will automatically create it. The filename can be one to eight characters long. The character in the first position must be alpha; other characters can be alpha or numeric.

3. Type comments about the file being transferred in the Comment field in the Host File box. The comments will be automatically included in the first record of the CICS/VS host file.

Transfer Options

1. Select a file type from the Transfer Options box to configure the way the file contents are treated during the transfer process. The choices are described below:
   - ASCII
     This option instructs the SNA host to translate data between the EBCDIC and ASCII character formats. Use this option for transferring ASCII formatted files, such as text edit files or print files. Do not use the ASCII option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
   - Binary
     This option instructs the SNA host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.
2. Click Append if a local file is to be added to the end of an SNA host file or if an SNA host file is to be appended to a local file.
   - If you do not select Append in the Receive dialog box, the SNA host file will replace the Java client file.
   - If you do not select Append in the Send dialog box, the TCP/IP host file will replace the SNA host file.

3. If the CRLF option is desired, check CRLF.

> **Note:** If you do not specify the CRLF option in send mode, the SNA host disregards the local file's line separators.
>
> Do not use the CRLF option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
>
> Disabling the CRLF option in the Transfer Options dialog box instructs the CICS/VS host to copy the file unaltered to the appropriate TCP/IP host. This option can be used to transfer encrypted data, compiled programs, and other data that is unreadable.

4. Click OK to begin the file transfer.
5. A Transfer Status window will display to confirm the transfer was successfully completed. Click OK.

Sending and Receiving TSO Files

WebConnect allows you to transfer files between a Java client and the Time Sharing Option (TSO) SNA application.

See the following steps to transfer files to and from a TSO application from a User Session.

1. Make sure that the WebConnect client is connected to the desired SNA host and TSO application.
2. From the File menu, select **File Transfer>TSO Send** (or TSO Receive). The appropriate file transfer window will display.

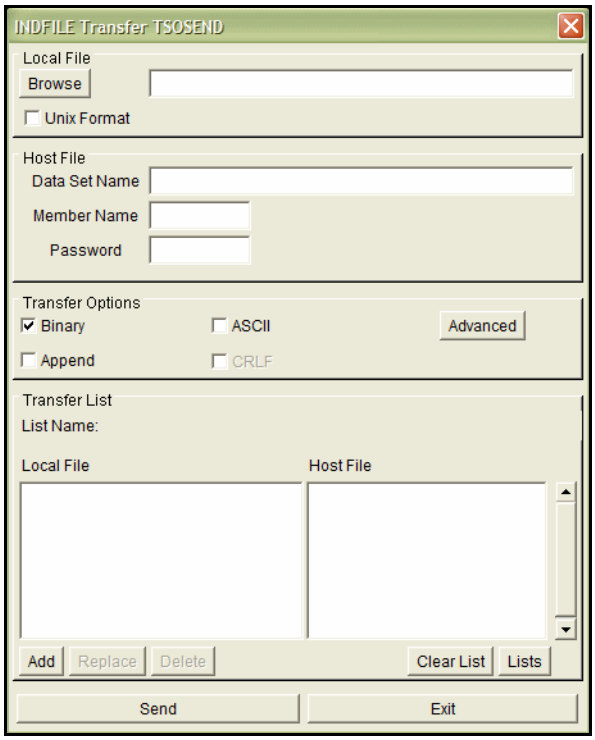


Figure 6-33: TSO File Transfer Example

3. Click Browse under Local File to search for the peer's file. A file selection window will display. for example, "Specify File to SEND." (The procedures for searching for the peer filename may differ by system.)

4. When you select the peer file and click Open, the name will display in the text field in the Local File box.

5. To transfer the file in UNIX format, click the UNIX Format button. UNIX format converts line separators to carriage return and line feed pairs during a Send operation. During a receive operation, carriage return and line feed pairs are converted to line separators.

6. Type a host filename in the Data Set Name field.

7. Type a member name in the Member Name field.

Note: The TSO host data set name must conform to IBM naming conventions. You can enter an existing data set name (stored in your library) or a new data set name. A closing quote will not display in the Member Name field.

The member name is optional. If entered, the member name should be a member in a partitioned data set directory.

8. WebConnect does not create the partitioned data set. When you use the Send window to copy a file to a partitioned data set and include a member name, the partitioned data set must exist.

9. The TSO application adds a user ID prefix to the combined data set and member name. To eliminate the user ID prefix, enclose the data set and member name in single (right) quotation marks, for example,'smith.pds2.file1.'

10. If a password is required, type it in the Password field. A password is only required if password-protection has been specified for the TSO data set.

11. Select a file type from the Transfer Options box to configure the way the file contents are treated during the transfer process. The choices are described below:
    - ASCII—this option commands the SNA host to translate data between the EBCDIC and ASCII character formats. Use this option for transferring ASCII formatted files, such as text edit files or print files. Do not use the ASCII option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
    - Binary—this option instructs the SNA host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.

Note: If you select the UNIX Format option when using the Binary option, the binary data will be corrupted.

Append a File

1. Click Append if you plan to add a local file to the end of an SNA host file, or you will append an SNA host file to a local file. The Append option will override other values specified by the LRECL parameter and RECFM options in the Advanced section.
    - If you do not select Append in the Receive dialog box, the SNA host file will replace the Java client file.
    - If you do not select Append in the Send dialog box, the TCP/IP host file will replace the SNA host file.

Advanced Options

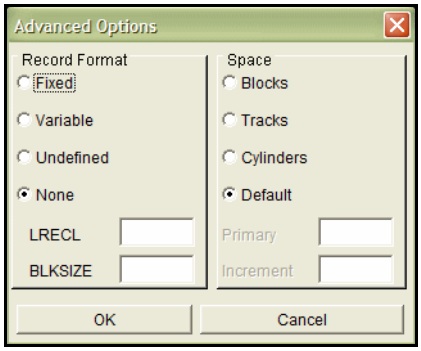


Figure 6-34: Advanced Options

1. In the Record Format box, click a radio button for the desired record format. This is only valid when sending a file. The valid values are described below:
   - Fixed—indicates the data set's records are fixed length.
   - Variable—indicates the data set's records are variable length.
   - Undefined—indicates the data set contains undefined record lengths.
   - None—indicates no record format is to be used.
2. To set the allocated amount of space for a new data set, click Blocks, Tracks, or Cylinders in the Space box. When you select Default, TSO uses the Blocks parameter default value which is determined by the specifications listed below:
   - Blocks—use the smallest storage entity.
   - Tracks—use the middle-sized storage entity.
   - Cylinders—use the largest storage entity.
   - Primary—the primary allocation for the Blocks parameter.
   - Increment—the increment allocation for the Blocks parameter.
3. If sending a file, type a size value (such as the data block size of a TSO data set) in the BLKSIZE field in the Record Format area. The variable you type represents a data block's byte count. The default value is 80.
4. Type a logical record length value of the SNA host file in the LRECL field in the Record Format area. The parameter value represents the number of characters for each record. If the parameter is not entered, the record length is determined by the file transfer operation. For new files, the parameter's default value is 80.

5. The characteristics of the existing file are used if you are replacing a file or appending information to a file. If you are transferring variable length records, the parameter represents the maximum record size. The parameter's value becomes the longest record sent if you do not send a record of the maximum operating system size; only valid if you are sending a file.

6. Click OK to close the Advanced Options window.

7. Click OK again to begin the file transfer.

8. A Transfer Status window will display to confirm the transfer was successfully completed. Click OK.

Sending and Receiving VM Files

WebConnect allows file transfer between a Java client and the Virtual Machine/Conversational Monitor System (VM) SNA application.

See the following steps to transfer files to and from a VM application.

1. Make sure that the WebConnect client is connected to the desired SNA host and VM application.

2. From the File menu, select **File Transfer>VM Send** (or **VM Receive**). The appropriate file transfer window will display.

3. Click **Browse** under **Local File** to search for the peer's file. A file selection window displays. The procedures for searching for the peer filename vary by system.

4. Select the peer file. The name displays in the text field in the Local File box.

   To transfer the file in UNIX format, click the UNIX format button. UNIX format converts line separators to carriage return and line feed pairs during a Send operation. During a receive operation, carriage return and line feed pairs are converted to line separators.

5. Type a host filename in the Data Set Name field in the Host File area. The VM filename can be one to eight characters long.

Note: The VM application automatically creates the receiving host's filename if a filename does not exist.

6. Type the appropriate file type in the VM File Type field. This parameter identifies the VM disk file type.

7. Type an appropriate value in the VM File Mode text box. This parameter identifies the VM disk file mode. If you do not enter a file mode parameter, the VM application uses the A1 default value.

8. Select a file type from the Transfer Options box to configure the way the file contents are treated during the transfer process. The choices are described below:
   - ASCII—this option instructs the SNA host to translate data between the EBCDIC and ASCII character formats. Use this option for transferring ASCII formatted files, such as text edit files or print files. Do not use the ASCII option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
   - Binary—this option instructs the SNA host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.

Caution: Do not select the UNIX Format option when using the Binary option or the binary data will be corrupted.

9. Click Append if a local file is to be added to the end of an SNA host file or if an SNA host file is to be appended to a local file.
   - If you do not select Append in the Receive dialog box, the SNA host file replaces the Java client file.
   - If you do not select Append in the Send dialog box, the TCP/IP host file replaces the SNA host file.
   - To use the CRLF option, check CRLF.

Note: You can click the UNIX Format check box for ASCII file transfers. This allows line separators to be converted to carriage return and line feed pairs during a Send operation.

   - During a Receive operation, carriage return and line feed pairs are converted to line separators.
   - Disabling the CRLF option in the Transfer Options dialog box instructs the CICS/VS host to copy the file unaltered to the appropriate TCP/IP host. This option can be used to transfer encrypted data, compiled programs, and other data that is unreadable.
   - If you do not activate the Append option in the Receive dialog box, the SNA host file replaces the Java client file. If you do not

activate the Append option in the Send dialog box, the TCP/IP host file replaces the SNA host file.

Caution: Do not use the ASCII or CRLF options for binary data such as output data from a data base program or object code files such as C compiler object code.

10. To specify the record format, LRECL, click the Advanced button and the Advanced Options window will display.

11. In the Record Format box, click a radio button for the desired record format. This is only valid when sending a file. The valid values are described below:
    - Fixed—indicates the data set's records are fixed length.
    - Variable—indicates the data set's records are variable length.
    - None—indicates no record format is to be used.

12. Type a logical record length value of the SNA host file in the LRECL field in the Record Format area. The parameter value represents the number of characters for each record. If the parameter is not entered, the record length is determined by the file transfer operation. For new files, the parameter's default value is 80.

    If you are replacing a file or appending information to a file, the characteristics of the existing file will be used. If you are transferring variable length records, the parameter represents the maximum record size. If you do not send a record of the maximum operating system size, the parameter value becomes the longest record sent. This is only valid if you are sending a file.

13. Click OK to close the Advanced Options window.

14. Click OK again to begin the file transfer.

15. A Transfer Status window will display to confirm the transfer was successfully completed. Click OK.

Multiple File Transfers

The WebConnect applet supports IND$FILE multiple file transfers. You can create and add files to a multi-file list, then transfer them as a group of files.

Please refer to "Sending and Receiving CICS/VS Files" on page 76 for basic file transfer procedures and windows.

1. Select **File>File Transfe**r from the applet menu.
2. Select the file transfer operation you want to use and click OK.
3. To select a local file, click the Browse button.
4. Name the file in the *Host File* and *Data Set Name* fields and click **Add**. The data set name you assigned will display in the host file name list.
    a. To clear the list, click the **Clear List** button.
    b. To define and save the list, click **Lists** (see Figure 6-35).
    c. Double-click a name in the Local File list to display it in the *Data Set Name* field.
    d. To delete a file from the list, select a file in the list and click **Delete**.
    e. To replace a file in the list, select a file in the list and click **Replace**. The file named in the *Host File* field**,** will replaced the selected file.
5. When all the files you want to transfer are in the Host File list, click OK.
    - A Transfer Status window will display to confirm the transfer was successfully completed. Click OK.
    - If there is no defined list, a single file transfer will be assumed.

File Transfer Lists

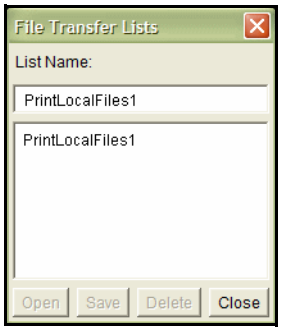


Figure 6-35: File Transfer List Name

1. This feature is designed for saving, deleting, and selecting multi-file transfer lists. The names of lists you have previously saved (if applicable) will display.

2. To add the currently defined list in Figure 6-36, on page 86, enter a list name and click Save.

Note: In this example the list name, “PrintLocalFiles1,” displays in Figure 6-36.

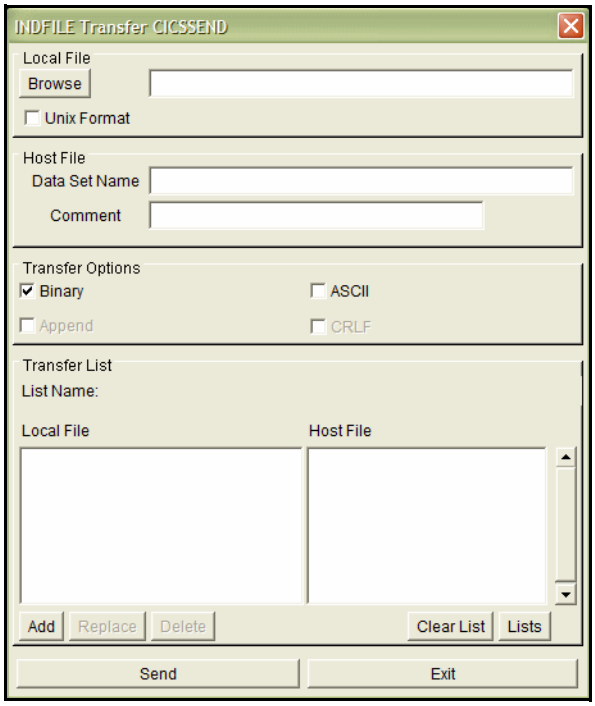


Figure 6-36: Transfer List Name

3. You can save the file transfer list and use it again.

4. To delete or use a defined transfer list, select the transfer list and click **Delete** or **Open**, respectively.

7 Classic Client User Preferences

This chapter contains information about editing user emulation session preferences from the **menu bar of the Emulator Screen. The following topics are covered:**

- ”Configuring Hot Spots” on page 88
- ”Configuring Colors” on page 90
- ”Configuring Attributes” on page 91
- ”The Setting Menu” on page 92

Edit>Preferences Menu

This section contains information about the options available from the **Edit>Preferences** menu on the Emulation Client menu bar.

Configuring Hot Spots

Hot Spots configuration allows you to select and display the definition of text strings as buttons when the strings appear on the screen.

Complete the following steps to set or modify hot spots.

1. Start your client session.

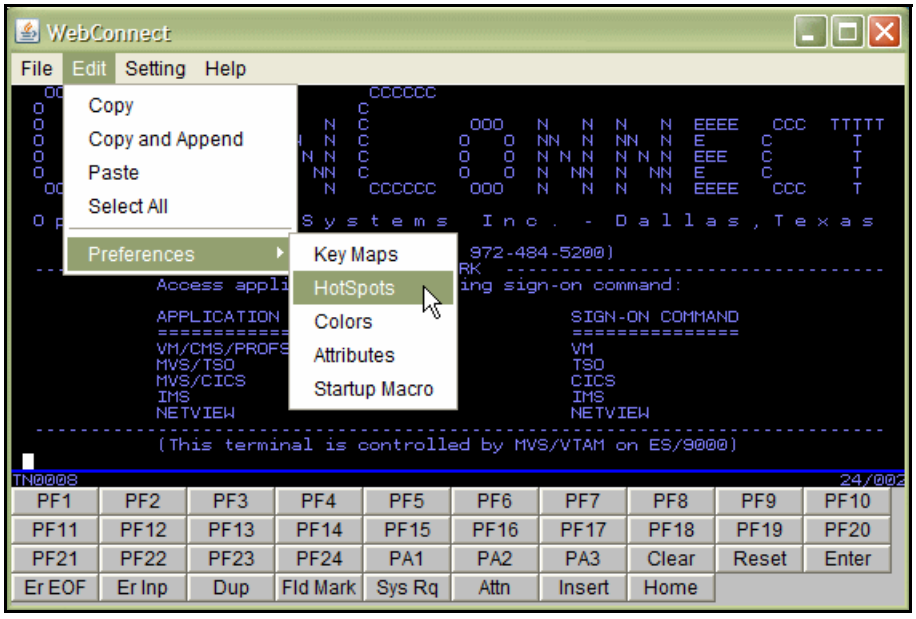


Figure 7-37: Edit User Preferences

2. Select **Edit>Preferences>Hot Spots** from the Menu.

   The Hot Spot Configuration screen displays.

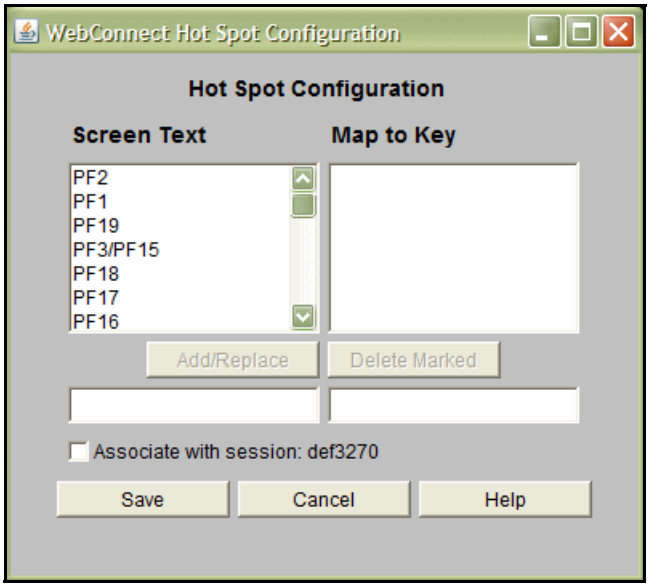


Figure 7-38: Configure Hot Spots

3. To Edit existing text:

   The Screen Text box will display a column of text, as applicable. Locate the screen text you want to edit and click the text so that it displays in the Map to Key edit box.

4. To Add New text:

   Type the text and the target key in the edit boxes.

5. Click **Add/Replace** to update the screen text-box columns.

6. Repeat the preceding steps for each hot spot change you want to make.

> **Note:** The **Associate with session:** option allows you to associate the hotspot values with your user ID and the session file name. When selected, the settings will apply to all sessions that you start with the same WebConnect session file. For example, using userid and 3270, your local filename will be userid.hs3. If saved for the specific session (as in def3270 for this example), the filename would be userid-def3270.hs3.

7. Click **Save**.

Configuring Colors

1. To change or enhance the color configuration, select **Edit>Preferences>Color** from the menu.

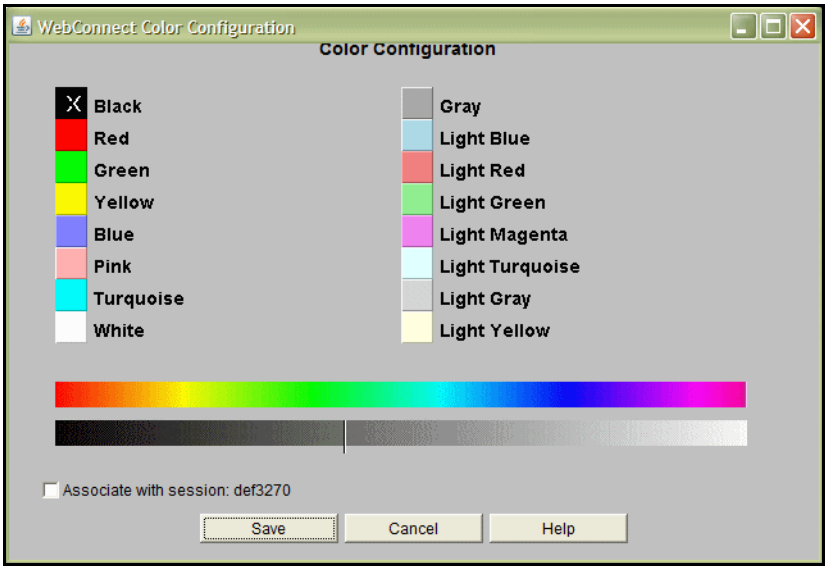


Figure 7-39: Edit Color Configuration

2. To edit a color, select the color you want to change. The selected color will be marked by **X** (Black in this example).
3. Click on another color in the color (top) bar to change it.
4. Click on the grey scale (bottom) bar to change the color intensity.

> **Note:** The **Associate with session:** box allows you to associate the color values with your user ID and the session file name. When selected, the settings will apply to all sessions that you start with the same WebConnect session file. For example, using userid and 3270, the user's local filename will be userid.cm3. If saved for the specific session (as in def3270 for this example), the filename would be userid-def3270.cm3.

5. Click **Save** when you complete the changes.

> **Note:** To assign or change a specific attribute color, see Configuring Attributes below.

Configuring Attributes

Complete the following steps to edit your screen attributes and colors.

1. Select **Edit** from the Menu Bar.
2. Select **Preferences>Attributes**.

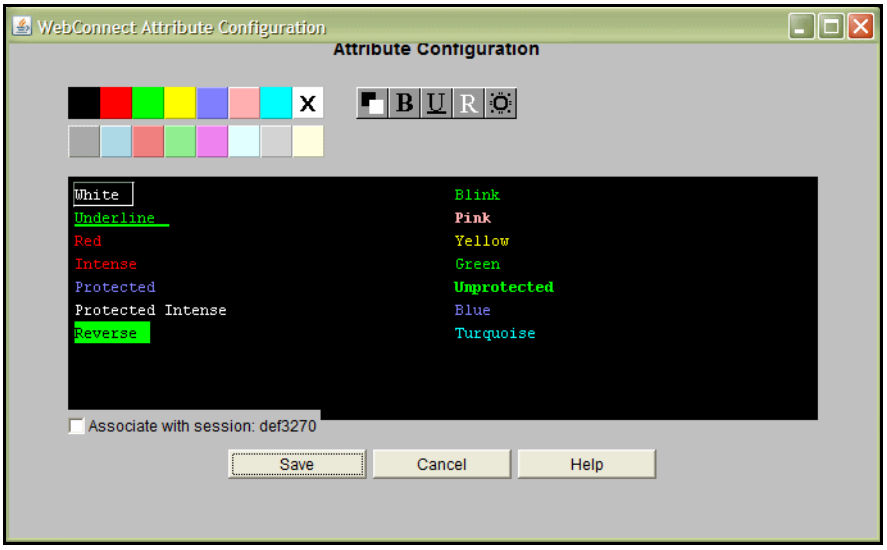


Figure 7-40: Attribute Configuration

3. The attribute configuration window displays an example of attributes supported by the terminal type (3270/5250/VT).
4. To assign a color to an attribute, select the attribute and select a color. The selected color is marked by **"X"** (Pink in this example), and the attributes are highlighted in the toolbar on the right, for example:

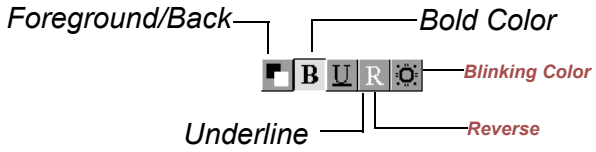


Figure 7-41: Attributes Toolbar

- **Foreground/Background Color**: toggles the color selection from the foreground color to the background color. Select another color from the color palette to change the color attribute.
- **Bold Color***:* change the color to/from **Bold**.

- **Reverse Foreground/Background Color***:* reverse the foreground/background colors (from black on green to green on black, for example).
- **Blinking Color***:* turn the blinking color on or off.

Note: The **Associate with session:** box allows you to associate the attribute values with your *user ID* and the *session file* name. When selected, the settings will apply to all sessions that you start with the same WebConnect session file. For example, using userid and 3270, the user's local filename will be userid.at3. If saved for the specific session (as in def3270 for this example), the filename would be userid-def3270.at3.

5. Click **Save** when you complete the changes.

Note: To change the color configuration, see ”Configuring Colors” on page 90.

The Setting Menu

This section contains information about the options available from the **Setting** menu on the Emulation Client menu bar.

Cursor to Mouse (Light Pen)

The Light Pen feature is designed to perform on-screen actions with or without using the keyboard. You can use it either of two ways.

1. Use **Shift + Left Mouse Button** (default).

   Or you can activate the cursor to mouse operation from the **Setting** Menu.

2. Enable the **Setting>Cursor to Mouse** feature and click the right mouse button for the global Light Pen functionality, as follows.
   - Click the right mouse button and position the cursor in a light pen field to invoke the light pen functionality.
   - Click and drag the cursor within a field to invoke the default block/highlighted functionality.

Type-ahead

In a normal 3270 or 5250 sessions, the keyboard locks after you press Enter or another AID key, and it will remain locked until the next buffer of information is received from the host. Enabling this option allows the next string of host information to enter a buffer without waiting for the next host screen. When the next host screen returns, WebConnect sends the saved buffer of information to the host.

1. To enable **Type-ahead**, select the number of buffers to use from the **Type-ahead** submenu (Type-ahead is enabled by default).
2. To disable **Type-ahead,** select Disable from the **Type-ahead** submenu.
3. To reset **Type-ahead** to the default setting, select **Reset** from the **Type-ahead** submenu.

Cursor Options

A cross-hair cursor makes it easier for you to view full lines of data (vertical or horizontal rule, or both) on any emulation screen. To select this function, complete the following steps.

1. To activate the cursor options, select **Setting>Cursor** from the menu. This option is only available to you if your System Administrator has given you permission for this setting in your session profile.

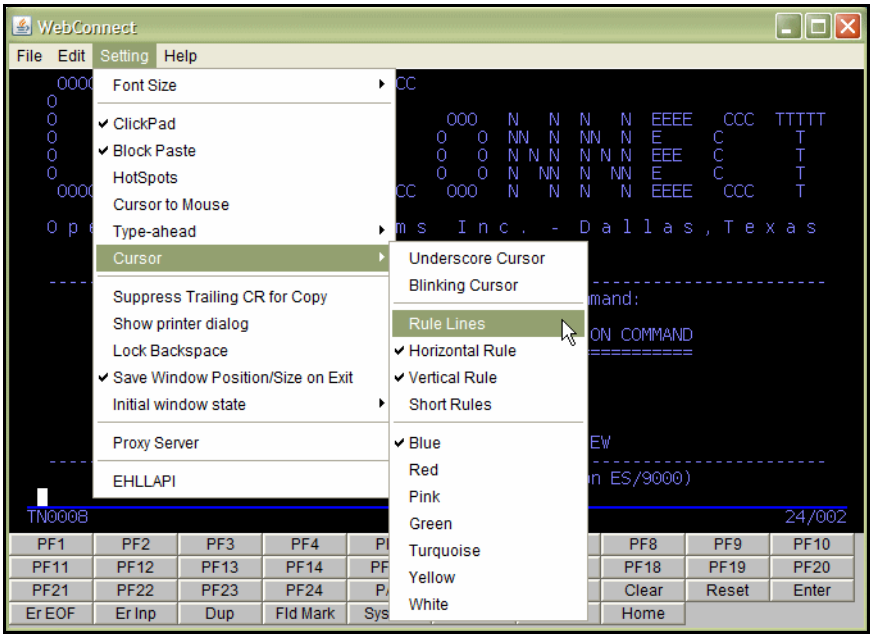


Figure 7-42: Setting Cursor Menu

2. You will find many options with this feature as described below:
   - Rule Lines: select rule lines off/on. Move the cursor up or across the screen to the position you need.
   - Horizontal Rule: select to view the horizontal rule.
   - Vertical Rule: select to view the vertical rule.
   - Short Rules: select to view the short rule or deselect to view the long rule across the entire screen.

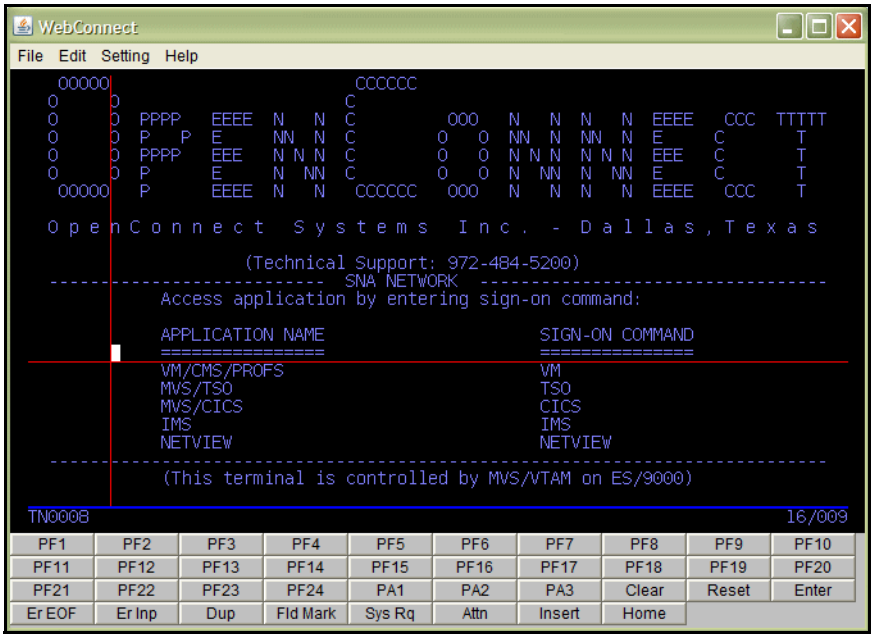


Figure 7-43: Cross-hair Cursor

3. You can set a color for the rule line according to your preference:
   - Blue
   - Red
   - Pink
   - Green
   - Turquoise
   - Yellow
   - White

8 Classic Client
WC Key Map, Macro, and VB Script Editor

The WebConnect Key Map/Macro Editor provides a way to create key commands and WebConnect Macros for 3270, 5250, or VT sessions.

Key Commands on page 99.

- Create a keyboard command by assigning a key or key sequence to a key combination.
- Allows users to access custom macros or key commands that were created by an administrator.

WebConnect Macros on page 107.

- Create a user, session, or server-level macro including basic program controls such as *goto*, *input variables*, *prompts*, *wait statements*, and other variables.
- Import, play, or edit pre-defined, third-party macros such as *“Rumba *.rmc”* macros.

VB Scripts on page 112.

- Create and edit user or session-level VB Scripts.
- Import and edit pre-defined, third-party macros such as *Attachmate EXTRA! *.ebm”* macros.
- Ehllapi must be enabled for this feature to appear. See ”3270, 5250, and VT Client Emulation Features” on page 50.

You can enable the Macro toolbar to make your macros easier to use, see ”Macro Toolbar” on page 53 for more details.

User Key Map Configuration Window

To use the WebConnect Macro Editor complete the following steps:

1. Select a session (3270, 5250, or VT) from the SESSION panel, shown in Figure 8-44, by clicking on it.

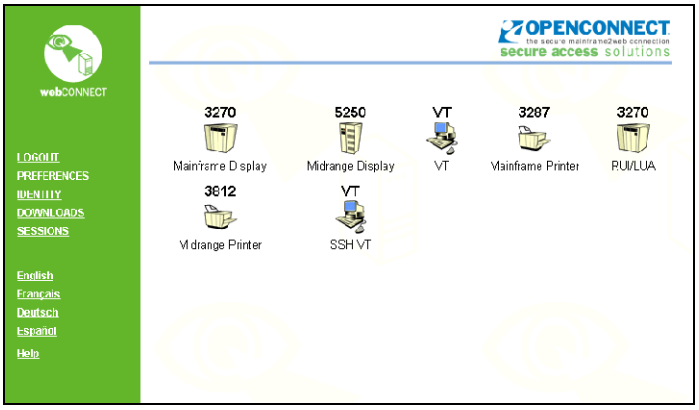


Figure 8-44: SESSION panel

2. The session opens in a separate window as shown in Figure 8-45.

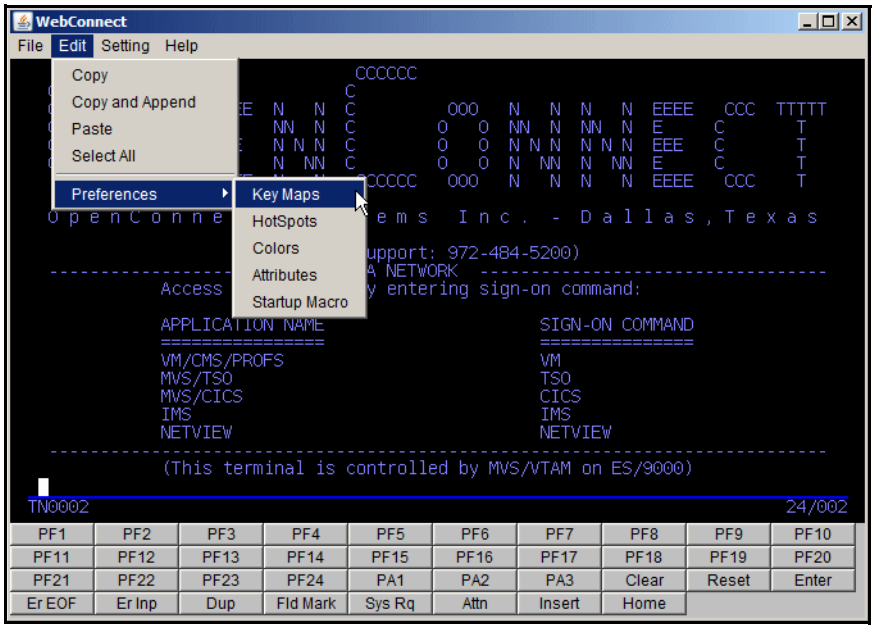


Figure 8-45: Key Map Menu

3. Select **Edit>Preferences>Key Maps**.

The User Key Map Configuration window displays showing a Key Commands tab by default, as well as a WebConnect Macro tab.

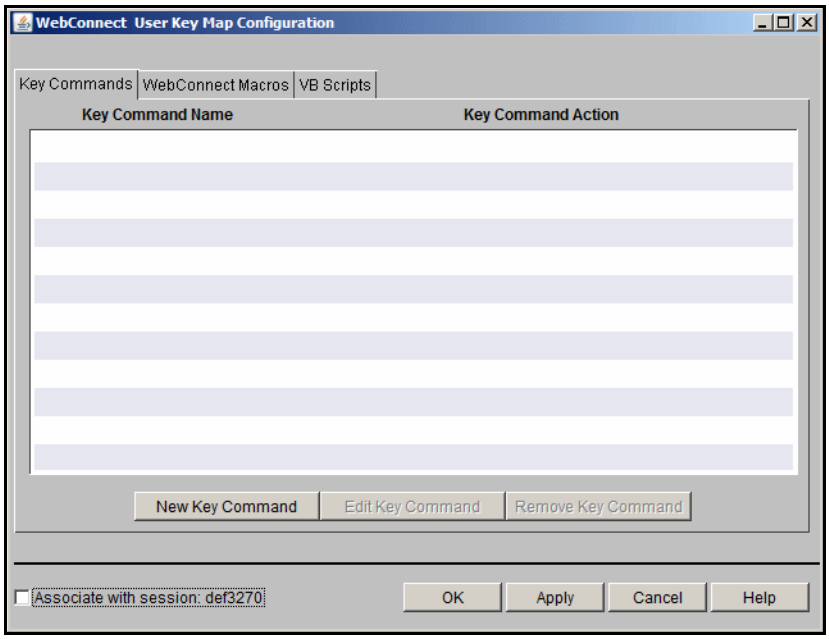


Figure 8-46: Key Map/Macro Configuration

4. Select the tab for the one you intend to create or edit for this session. See ”Key Commands” on page 99, or ”WebConnect Macros” on page 107, or ”VB Scripts” on page 112.

   Associate with session: is grayed out and does not apply to VB Scripts.

Key Commands

Creating a New Key Command

1. Select the **Key Commands** tab (default tab).
2. Click **New Key Command.**

   A dialog box appears as shown in Figure 8-47, on page 100.

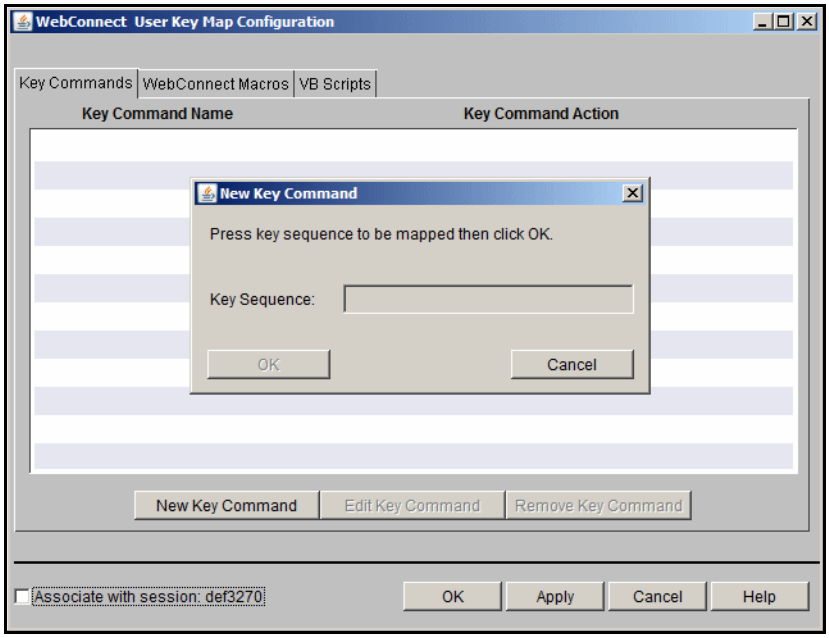


Figure 8-47: Create Key Sequence

3. On the keyboard, enter the key or key sequence command you want to map. The selected keys automatically display in the shaded **Key Sequence** box.

4. When you have completed the key commands, click **OK**.

   The new Key Command Name appears in the list as shown in Figure 8-48, on page 101.

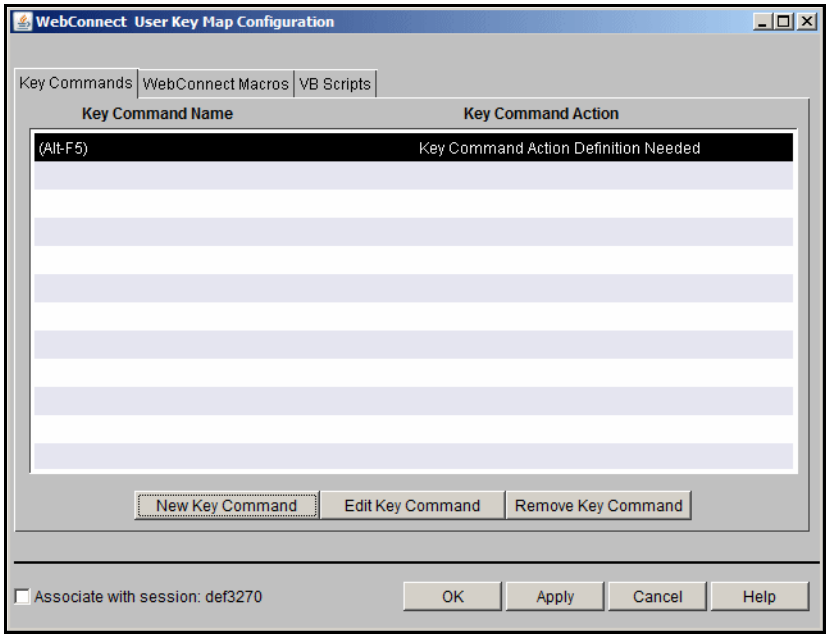


Figure 8-48: Key Command Action

- The **Key Command Name** displays the key map sequence you entered.
- The **Key Command Action** shows that a definition is needed.

Editing a Key Command

To edit a Key Command complete the following steps:

1. Select **Edit Key Command**. The panel shown in Figure 8-49 displays where commands can be mapped to the key(s) you entered.

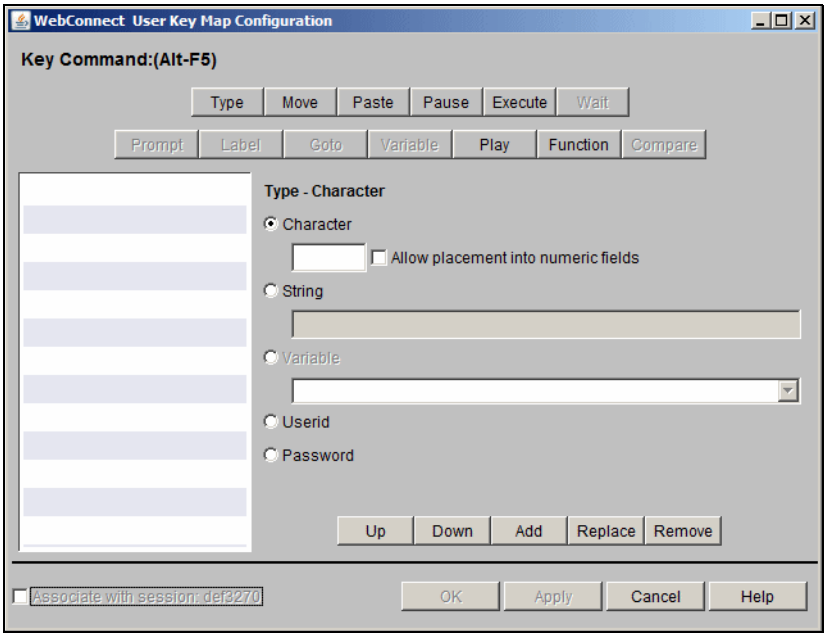


Figure 8-49: Add Key Map Commands

> **Note:** You can add multiple commands to a key command. Table 8-8 on page 102 contains the command menu definitions.

2. Select a command from the buttons menu that you want to add to the key command.

3. Click **Add** after each change.

Table 8-8: Macro Editor Command Descriptions

Command	Description
Type	Define characters and/or strings which are input as keystrokes. Also used to type the value of a selected variable or the current user ID and password values.
Move	Moves the cursor to the configured row/column.
Paste	Use to copy and then paste the contents of the configured file into the current cursor position within the emulation.
Pause	Use to pause the system for either a time interval or for a user response. User response mode allows setting a text message but does not capture any input data.
Execute	Use to execute a program external to the applet. You can specify any command line parameter needed by the program within the function configuration.

Table 8-8: Macro Editor Command Descriptions (Continued)

Command	Description
Wait	Use to enter a wait statement, see ”Wait” on page 103, Table 8-9 on page 105.
Prompt	Prompt the user for input which can be assigned to a variable or sent directly to the screen at the current cursor location.
Label	Provides a marker to which the **Goto** statement can direct macro execution.
Goto	Add a **Goto** control statement to change the currently executing line of the script to **Label**.
Variable	A variable **String** (add a name and value). A variable **Screen** places screen data at row/column, and places it in the variable “name.” You can specify 1) the length of screen data, 2) end of word, or 3) end of field. A variable **Prompt** to create a specified 1) title, 2) message, 3) input length.
Play	Execute a previously defined macro.
Function	Add a selected function to this command from a pull-down menu. A definition for each function displays in the shaded box. You can find all standard **AID Keys**, such as **Enter**, **Clear**, **PF1** through **PF2 4**, **PA1**, etc., under Function.
Compare	Provides the ability to compare existing variables to each other, or to compare constant values and then select a ***Goto*** branch based on an “*equals*” comparison or a “*not equal*” value.
Up/Down	Use to organize the statements into desired command sequence.
Add	Adds the command selected after the current line in the macro.
Replace	Highlight a statement and replace one statement with another.
Remove	Highlight a statement and delete it from the macro.
OK	Use to save and exit the command configuration.
Apply	Use to apply current changes to the command configuration.

4. Click **OK** when you are finished.

   To play a key command use the mapped key or key sequence.

Wait

Wait provides several formats that allow executing WebConnect Macros to wait on synchronized states or specific text messages. The following section discusses those formats.

Cursor

Allows you to pause macro execution until the emulation cursor is at the defined row/column location. The default time-out value of zero (0) waits for an unlimited time.

By default, the wait starts immediately upon executing the line in the script. If the **After next AID key** box is checked the operation does not take effect until after the next AID key has been processed by the emulation.

Wait Text

The Wait Text statement operates in one of two ways determined by the **After next AID key** check box. Having the **After next AID key** checked (enabled) provides backward compatibility with older wait text macros or named maps.

In either case the only *required* parameter is *text* in the **Wait For Text** dialog box. See ”After next AID key Disabled (Default)” on page 105 and ”Editing macros built prior to WebConnect 6.3” on page 105 for details about the two modes of operation.

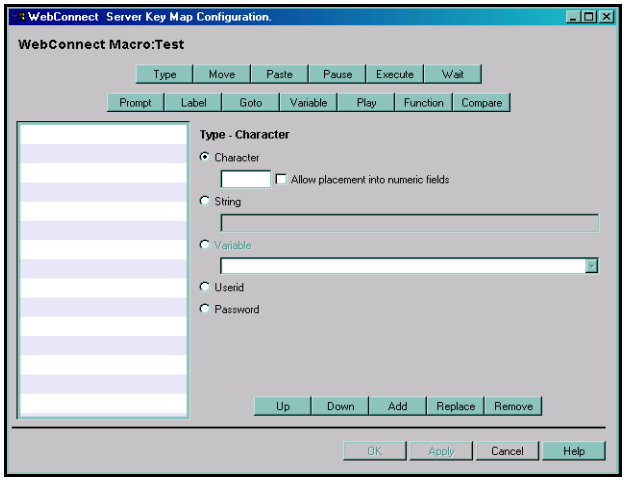


Figure 8-50: Wait Tab

After next AID key Disabled (Default)

Executes the macro until the time-out value (optional) has elapsed or text is matched on current host screen.

Table 8-9: Wait Options—After next AID key Disabled

Option	Availability	Description
Wait For Text:	**Required**	Alphanumeric string
Ignore Case:	**Unavailable**	
At Row/Column:	**Optional**	Enable row and column designation in Row and Column below
Until End Of Screen:	**Unavailable**	
Row:	**Available if At Row/Column is checked.**	Available if At Row/Column is checked. Specify exact row where text string is to begin.
Column:	**Available if At Row/Column is checked.**	Available if At Row/Column is checked. Specify exact column where text string is to begin.
Second(s) Until Timeout	**Optional**	Time in seconds until the wait is stopped
Timeout Macro:	**Optional**	The timeout condition can be used to trigger a Timeout Macro. Invoking the Timeout macro effectively ends the current macro.
After next AID Key:	**UNCHECKED**	Disabled (default)
Proceed Goto:	**Unavailable**	
Timeout Goto:	**Unavailable**	

Editing macros built prior to WebConnect 6.3

After next AID key Enabled

Executes the macro *when* text matches that in the **Wait For Text** dialog box on *any* of the emulation screens *as they occur* until the time-out value has elapse if set.

Allows the macro to continue processing subsequent macro statements. AID (Attention Identifier) Keys from the macro may navigate to new host screens.

If you do not set either label, the macro execution resumes on the next macro statement after matching text or a time-out has expired.

Table 8-10 describes the options available with After next AID key enabled.

Table 8-10: Wait Options—After next AID key Enabled

Options	Availability	Descriptions
Wait For Text:	**Required**	Alphanumeric string
Ignore Case:	**Optional**	Ignore case in Wait For Text
At Row/Column:	**Optional**	Enable row and column designation in Row and Column below.
Until End Of Screen:	**Conditional**	Available if At Row/Column is enabled
Row:	**Conditional**	Available if At Row/Column is checked. Specify exact row where text string is to begin.
Column:	**Conditional**	Available if At Row/Column is checked. Specify exact column where text string is to begin.
Second(s) Until Timeout	**Optional**	Time in seconds until the wait is stopped
Timeout Macro:	**Unavailable**	
After next AID Key:	**CHECKED**	Enabled
Proceed Goto:	**Optional**	If the wait text cannot be found, Goto statement label.
Timeout Goto:	**Optional**	If the macro times-out before the text is found, Goto statement label.

Keyboard Unlock

The macro execution pauses until the keyboard unlock command is received. You can configure the wait to only apply after the emulation parses the next AID key. This command is mainly used for synchronization purposes.

Clear Screen

The macro execution pauses until the clear screen command is received. You can configure the wait to only apply after the emulation parses the next AID key. This command is mainly used for synchronization purposes.

WebConnect Macros

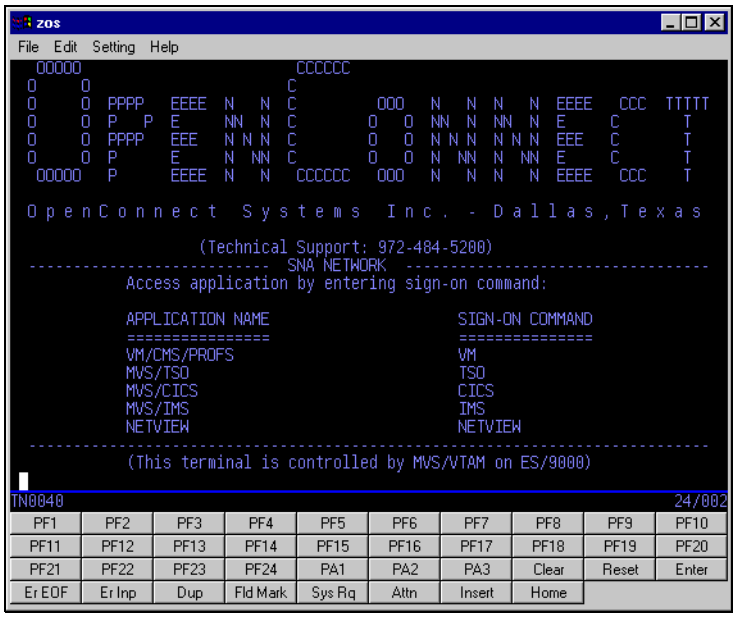


Figure 8-51: 3270 Session

Suppose, for example, you want to login to CICS from a current 3270 session. This would require the following steps.

1. Type **CICS** and press **Enter**.
2. Enter your **User ID** and **Password**.
3. Press **Enter**.

Instead, you can create a WebConnect Macro to represent the command sequence. By automating the required logon procedures, you save time by entering a key command or macro to complete the steps.

Create a WebConnect Macro

1. Select (click) a session (3270, 5250, or VT) from the SESSION panel. See Figure 8-44, on page 98.

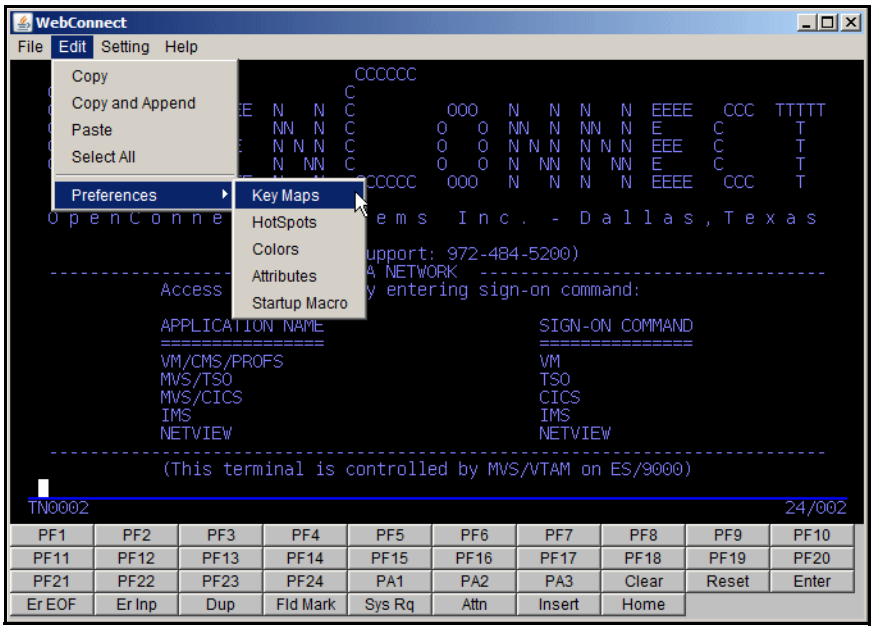


Figure 8-52: WebConnect Macro Menu

2. From the emulation session, select **Edit>Preferences>Key Maps**.

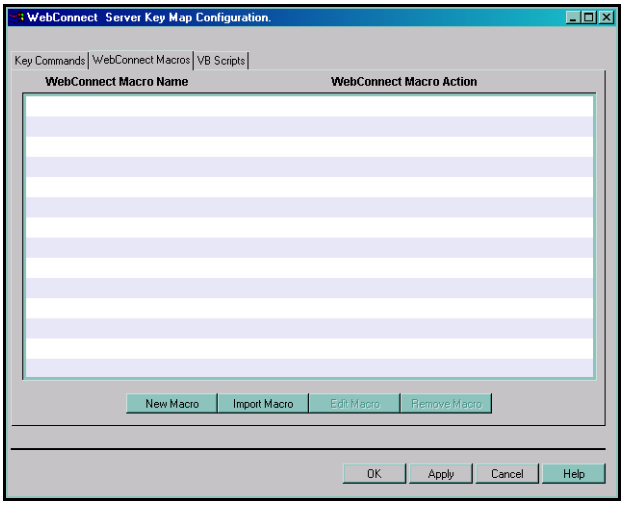


Figure 8-53: WebConnect Macros

3. The **Key Map Configuration** window displays a Key Commands tab (default) and a WebConnect Macro tab. Select the one you intend to create for this session, see ”Key Commands” on page 99, or ”Create a New WebConnect Macro” on page 109.

Create a New WebConnect Macro

1. Click **New Macro** from the **WebConnect Macro** tab from any session type. See Figure 8-53.

2. Click **New Macro**. Figure 8-54 displays.

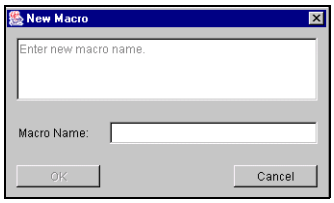


Figure 8-54: Name New Macro

3. Enter a new macro **Name** and click **OK**.

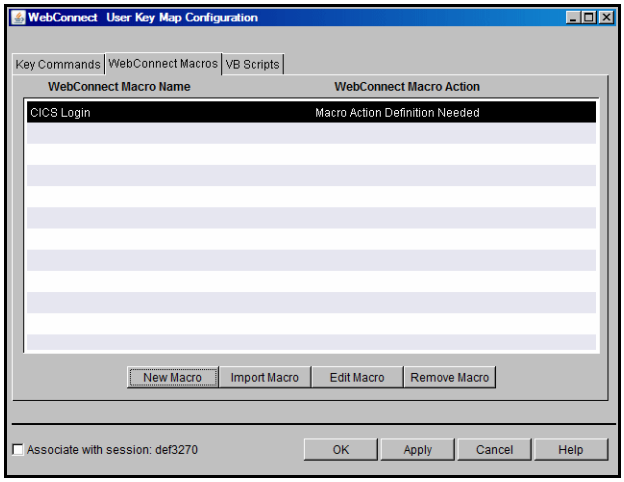


Figure 8-55: Define Macro Action

4. Figure 8-55 displays with the macro name and show that a macro definition is needed.

5. Select (highlight) the macro and click **Edit Macro**.

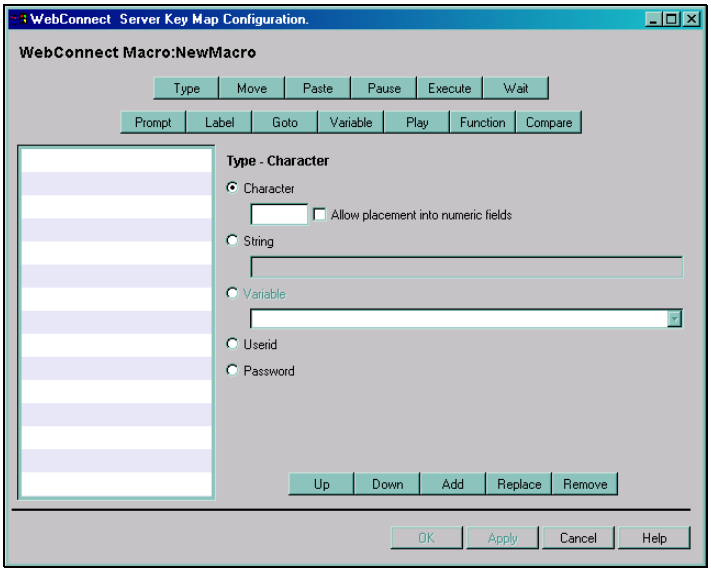


Figure 8-56: Configure New Macro

6. Select a command from the buttons menu to add commands to the WebConnect Macro.

Note: You can add multiple commands to a key command or WebConnect Macro. For command menu definitions see Table 8-8 on page 102.

7. Click **Add** after each change to the macro configuration.

8. Click **OK** when you are finished.

9. To play the macro, select **Play Macro** from the **File>Macro Rec/Play>Play Macro** emulation session **Menu**.

Import WebConnect Macro

You can import a macro from any of the type session selected (3270, 5250, or VT).

1. Select the **WebConnect Macros** tab from any session macro editor, see Figure 8-57.

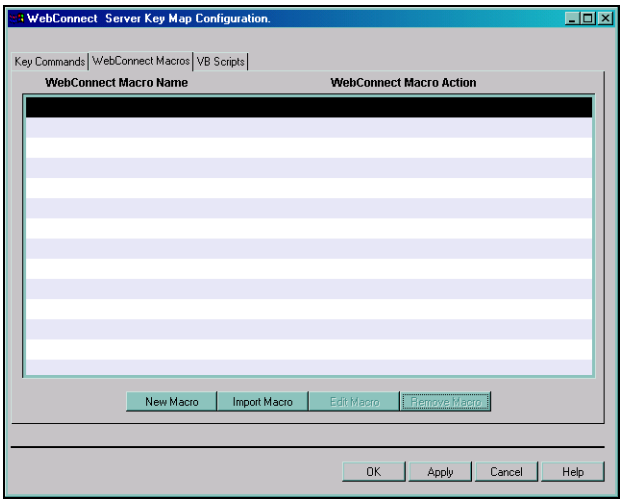


Figure 8-57: Import Macro

2. Select **Import Macro** from the **WebConnect Macro** tab.

3. A File Browser window opens, **Select Macro File to Import**, where you can point to an existing macro file. If you have saved *.rmc Rumba files, select the directory or folder from the pull-down menu in the **Look In** window and select the location where the files are stored.

4. Select a macro file, *.rmc, and click **Open** on the browser dialog.

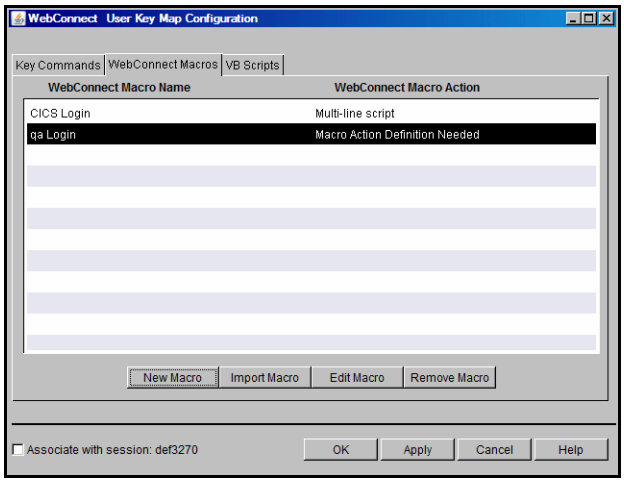


Figure 8-58: Imported Macro

The imported macro name displays in the “Key Map Configuration.”

5. You can use or edit the macro as you normally would. See Table 8-8 on page 102, and ”Create a New WebConnect Macro” on page 109" for macro editor definitions.

Note: Unsupported macro commands are converted to **Pause** commands with the message field indicating the unsupported command. The following Rumba macro commands are currently unsupported:

- Connect
- Disconnect run Application File Transfer receive
- File Transfer Send
- Compare values-except Goto (Label), which is supported
- Copy From
- Paste To

6. Click **Apply** after each change you make.
7. Click **OK** when you are finished.
8. To play the macro, select **Play Macro** from the **File>Macro Rec/Play>Play Macro** emulation session Menu.

VB Scripts

All VB Scripts must be saved to the desktops where they are required to run, otherwise the scripts do not run. Alternatively, the administrator may create a shared drive common to all desktops and configure session parameters to run the VB Script from the central location.

1. Click **New Macro** from the **WebConnect Macro** tab from any session type. See Figure 8-59, on page 113.

   Click **New**.

2. The **Key Map Configuration** window displays. Select the **VB Scripts** tab.

Note: If the VB Scripts Tab does not appear in the dialog box, you may not have EHLLAPI enabled from the applet. From a client emulation applet ensure that Setting>EHLLAPI is set. Exit and restart the Key Map configuration dialog. See also ”3270, 5250, and VT Client Emulation Features” on page 50.

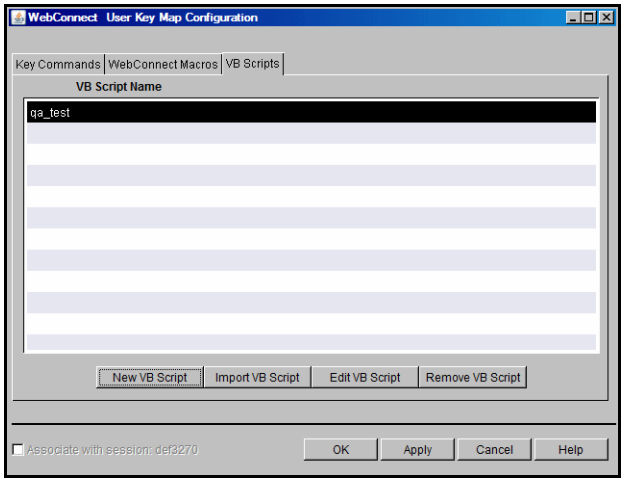


Figure 8-59: VB Scripts Tab

Creating a New VB Script

To create a new VB script complete the following steps:

1. Click **New VBScript**. The script name dialog box appears as shown in Figure 8-60.

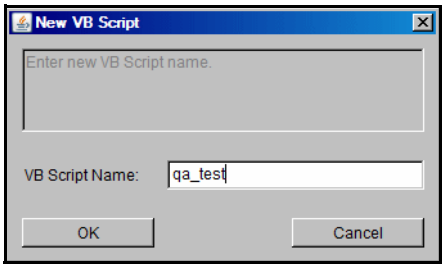


Figure 8-60: New VB Script Name

2. Enter a new **VB Script Name** and click **OK**. The new VB Script name now appears in the script list as shown in Figure 8-61, on page 114.

Note: All VB Scripts must be manually copied to a shared drive common to the target desktops, otherwise the scripts do not run.

To edit the VB Script see ”Editing a VB Script” on page 114.

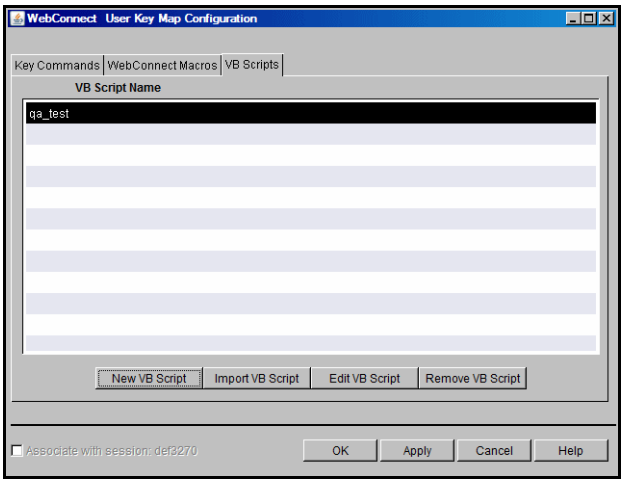


Figure 8-61: New VB Script

Import VB Script

You can import an Extra VB Script into the WebConnect VB Script Editor from any 3270 or 5250 session types you select.

1. Select the **VB Script** tab from any session macro editor. See Figure 8-59.
2. Click **Import VB Script**.
3. A File Browser window opens the **Select VB Script to Import** dialog box where you can select an existing VB Script file.
4. Select an Extra BASIC macro file (*.EBM) and click **Open**.

   The selected macro file is converted to the WebConnect VB Script file format and the file name appears in the script list as shown in Figure 8-61.
5. You can use or edit the script as you normally would.

Editing a VB Script

To edit a VB Script complete the following steps:

1. Click **Edit VB Script**.

2. The WebConnect Script Editor appears in a separate window as shown in Figure 8-62 below. See the *WebConnect Script Editor User Guide* and the *WebConnect Script Language Reference Guide for more information about editing VB Scripts.*

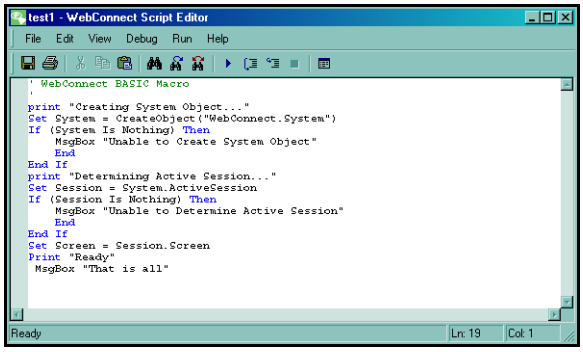


Figure 8-62: WebConnect Script Editor

Remove a VB Script

To remove a VB Script complete the following steps:

1. Select the script you want to remove from the list in the Key Map Configuration window. See Figure 8-61, on page 114.
2. Click **Remove VB Script**.

   The Delete VB Script Confirmation dialog box appears.
3. Click **Yes**.
4. Click **OK** or **Apply**.

User Macro Autostart

The User Macro Autostart feature enables users to assign *User Defined Startup Macros* to specific session numbers and save them in their user preference settings. This feature requires no administrator intervention, providing users direct control over their startup macro configuration.

When using the User Macro Autostart feature keep in mind the following:

- Each session type maintains its own session number list except when Cached Applets or the Controller Applet is used. In those

cases, every session, type (3270, 5250, VT) use the same session number list. For more information about the Controller see ”Controller Applet” on page 48.

- Session level startup macros take precedence over user autostart macros and start first.
- Macro operation is exactly the same as if it were invoked through **File-Macro Rec/Play-Play Macro** menu option.

There are three modes of operation:

1. **Default Macro set only**—Each time the particular session icon is clicked the default macro is run. No session number association is required.
2. **Default Macro set to *None* with macros assigned in the Startup Macro List**—The first time the session icon is clicked the macro assigned to Session Number 1 runs. The second time the session icon is clicked, the macro assigned to Session Number 2 runs and so on.
3. **Default Macro set and macros assigned in the Startup Macro List**—The first time the session icon is clicked the macro assigned to Session Number 1 runs. The second time the session icon is clicked, the macro assigned to Session Number 2 runs and so forth. Subsequent unassigned sessions run the default macro.

Note: When a session is terminated, the Session Number assigned to it on the **Startup Macro List** is left open. The next time that session type’s icon is clicked, the first open Session Number is assigned to the new session and the corresponding macro assigned to that Session Number is started.

For example: A user assigns startup macros to four Session Numbers and starts those sessions. Later, the session assigned to Session Number 3 is lost for whatever reason. When the user clicks that session icon again, the resulting session is assigned to the open Session Number 3. If the user clicks the session icon once more, making a total of five sessions, the fifth session starts according to the Default Macro setting since a fifth session had not been assigned to a macro on the Startup Macro List.

Assigning Autostart Macros

To setup Macro Autostart complete the following steps:

1. Click **Edit>Preference>Startup macro**. See Figure 8-64, on page 118.

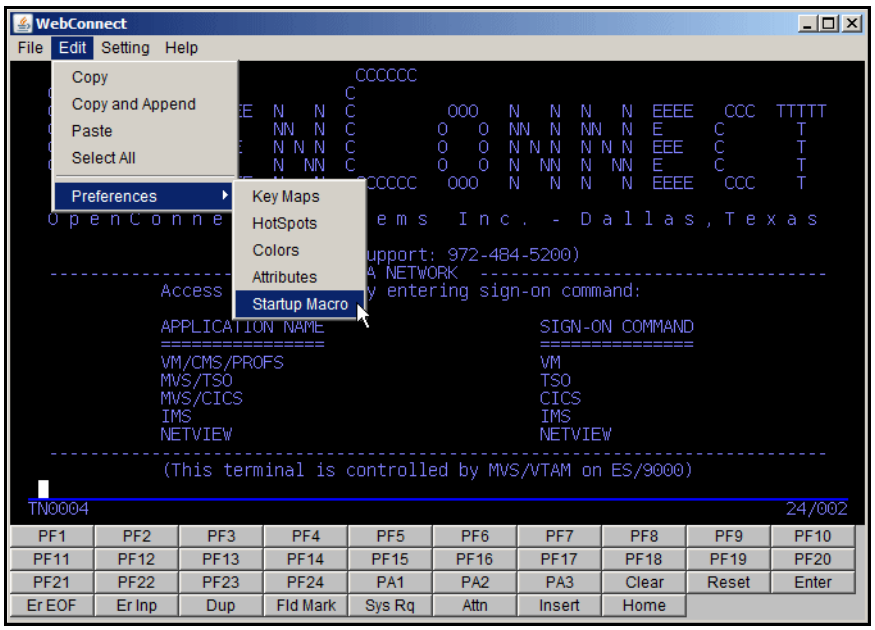


Figure 8-63: User Autostart Macros

The **Macro Operations** panel appears as shown in Figure 8-64, on page 118.

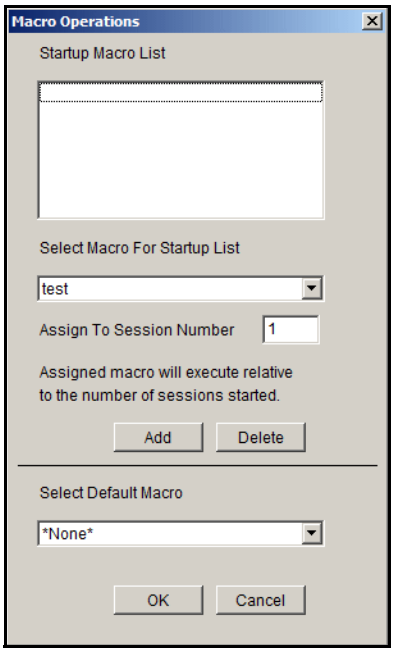


Figure 8-64: User Macro Autostart

Default Macro

2. Select a macro from the **Select Default Macro** list as the default startup macro for the current session type or leave it set to the default, **None**.

> **Note:** Only keystroke macros for the *current* Session type are available along with Complex Macros. BASIC macros as are available for 3270 and 5250 sessions.

Startup Macro List

3. Enter the subsequent session number (1-99), if any, you want to assign a startup macro to in the **Assign To Session Number** field.

4. Select a macro from the pull-down **Select Macro For Startup List** and click **Add**.

   The selected macro appears in the **Startup Macro List**.

5. Repeat Steps 3 and 4 for additional sessions making sure to enter unique session numbers in the **Assign To Session Number** field for each macro.

6. Click **OK**.

Unassigning Startup Macros

To unassign and disassociate a macro from a session complete the following steps:

1. Click **Edit>Preference>Startup macro**.

   The **Macro Operations** panel appears as shown in Figure 8-64, on page 118.

2. Select **None** from the **Select Default Macro** list. Click **OK**.

3. Select the macro in the **Startup Macro List** that you wish to unassign, if any and click **Delete**.

4. Click **OK**.

9 .NET Client Sessions

The .NET client requires two Microsoft packages and the *WebConnect .NET Security Policy Deployment Package*. See ”Downloading .NET Components” on page 41 for complete information.

The **SESSION panel**, shown in Figure 9-65, is the initial user window displayed by WebConnect and provides access to pre-configured sessions, user-configurable preferences, settings, and other components that have been implemented by your System Administrator.

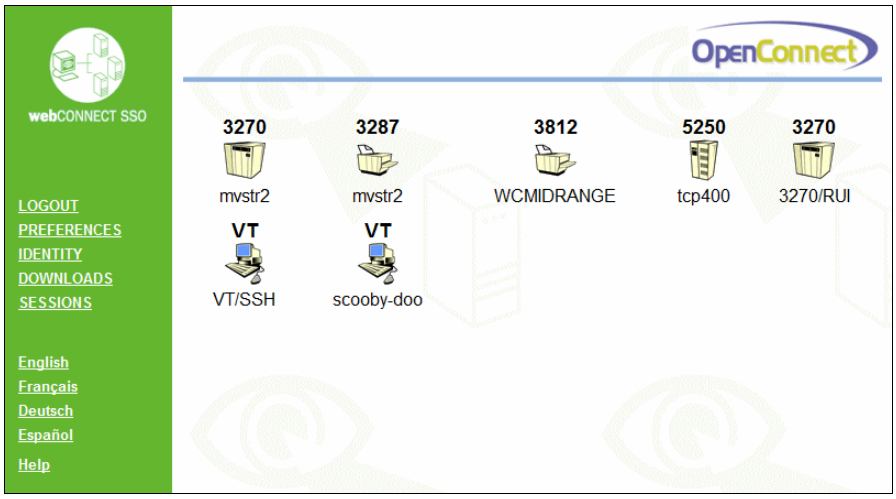


Figure 9-65: SESSION Panel

3270, 5250, and VT Client Emulation Features

The 3270, 5250, and VT .NET client emulation have similar user interfaces and share many interface features. The client window has a Menu Bar, an Emulator Screen Toolbar, a Tab bar, an Emulation Space, and an optional ClickPad as shown in Figure 9-66 below.

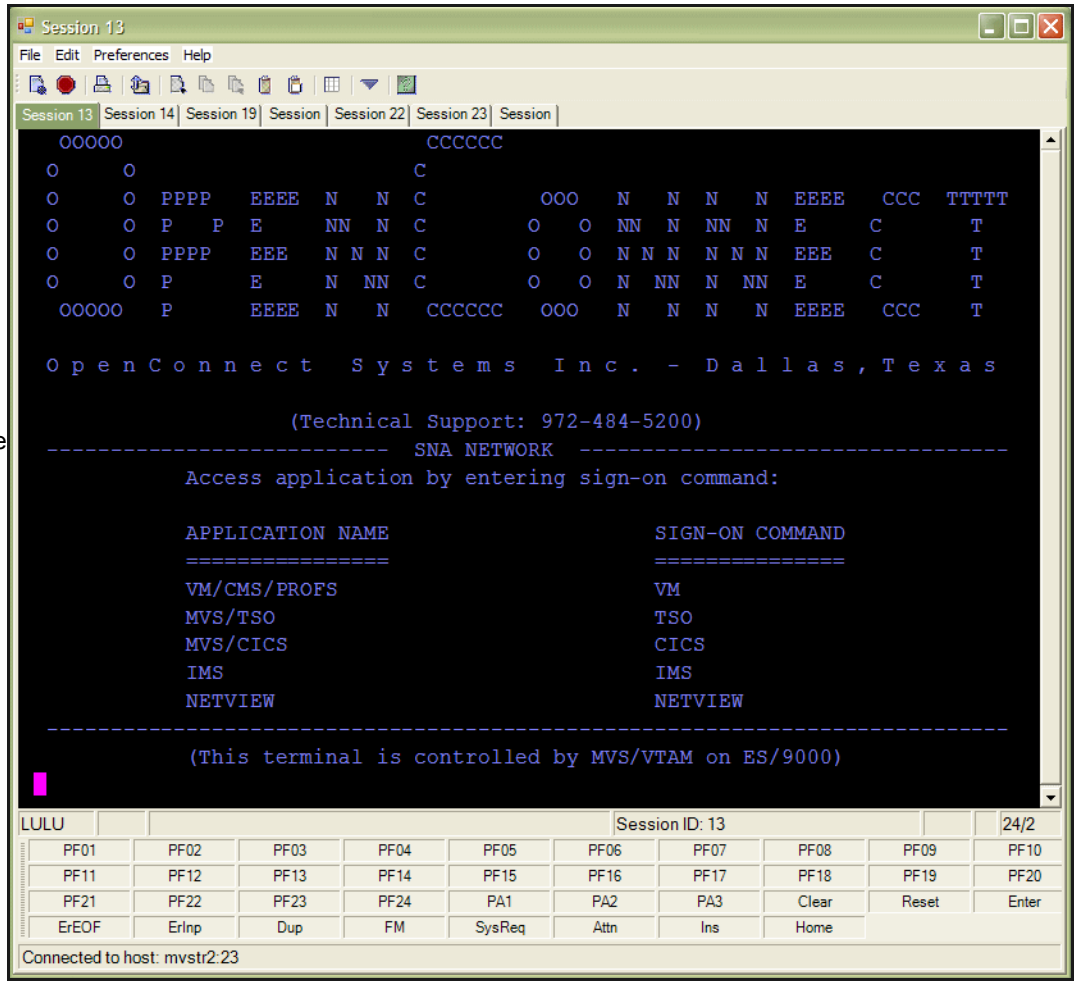


Figure 9-66: Client Window

Menu Bar

Your administrator can enable different menu options for your user ID; therefore, all of the following functions may not be visible (3270, 5250 and VT) on your Menu Bar.

Table 9-11: Session Menu Options (Sheet 1 of 2)

Menu	Item	Definition	
File	New Session	Opens a new session.	
	Print Screen	Prints the current screen.	
	Start Associated Print	Starts a print session if one is associated with this session.	
	Save History to File	Allows screen history to be saved to a file.	
	Macro	Play Macro	Play a pre-recorded macro.
		Record Macro	Record actions for macro until 'End Recording' is clicked.
		End Recording	Stop recording and save previous actions into a macro.
		Cancel Macro	Stop recording and discard recorded actions.
	Save Settings	Saves the user's settings.	
	File Transfer	Transfers files between a Java client and an SNA host.	
	File Transfer Lists	Create and use lists of file transfers.	
	Session List	Lists all open sessions. Allows termination of sessions.	
	FTP	Invokes the FTP executable. Only FTP windows applications with a GUI interface are supported. Command line console FTP clients are not supported.	
	Exit	Closes the emulation window and exits the session.	

Table 9-11: Session Menu Options (Sheet 2 of 2)

Menu	Item	Definition
Edit	Cut	Place selected text in clipboard. Replace unprotected portions of selected text with spaces. Not applicable for VT.
	Copy	Copies highlighted text from the screen to the clipboard.
	Copy and Append	Copies and appends (adds) data to the clipboard without destroying existing clipboard data.
	Paste	Paste the copied text from the clipboard to the highlighted area of the window.
	Continue Paste	When cursor reaches the last valid paste location the remainder of the clipboard data is saved and the menu option Continue Paste is enabled. When selected paste data comes from the *saved* buffer and not from the clipboard. It is disabled after all saved data has been pasted.
	Select All	Selects the entire screen to be copied and pasted.
Preferences	Keyboard Maps	Edit the Keyboard Maps for this session.
	Colors	Specify Colors.
	Attributes	Edit the Attributes for this session.
	ClickPad	Turns ClickPad (PF Keys) at the bottom of the screen on and off.
	Hotspots	Edit Hot Spots.
	VB Scripts	Edit the VB Script Configuration window.
	Startup Macro	Edit Startup Macros.
	Settings	Edit Audio, Copy/Paste, Cursor, Display, EHLLAPI, Keyboard, Mouse, Printer, Proxy, and Window Settings. See ”The Settings Menu” on page 250 for details.
Help	About Keys	Displays a function key map.
	Trace Keys	Displays diagnostic information for EHLLAPI and keyboard macros previously executed.

Session Toolbar Menu

The Sessions Toolbar menu must be enabled by your administrator. You can toggle it ON/OFF under the **Preferences>Settings>Display** menu on the client window menu bar.

Table 9-12: Emulation Icon Values (Sheet 1 of 2)

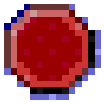
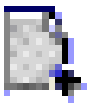
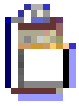
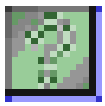
Icon	Definition
	New Session—Opens a new session emulation screen.
	**Disconnect Session**—Exits the present session without saving information.
	Print Screen—Sends the emulator screen to a print session.
	File Transfer—Transfers files between a Java client and an SNA host application using standard IND$FILE transfer protocol.
	**Select All**—Highlights the entire screen.
	Copy—Copies highlighted areas of the screen to the clipboard.
	Copy and Append—Used to copy and append (add) data to the clipboard without destroying the existing data that is already on the clipboard. *Use the Left mouse button to identify (highlight) text you want to copy.*

Table 9-12: Emulation Icon Values (Sheet 2 of 2)

	Paste—Copies data from the clipboard to the highlighted area on the screen.
	**Block Paste**—Copies data from the clipboard to the highlighted area on the screen using Block mode.
	ClickPad—Turns the ClickPad (PF Keys) at the bottom of the screen on and off.
	Play Macro—Displays a list of previously recorded macros and allows you to select one to play.
	**About Session**—Displays detailed information about client session and EHLLAPI.This information can be saved, printed, or copied to the clipboard from this dialog.

Tab Bar

The Tab Bar displays a tab for each open session. Clicking on a tab displays the corresponding session in the emulation space.

Emulation Space

The Emulation Space, located below the Menu and Tool bars, displays detailed messages of the WebConnect server and the host connections. If encryption is used, messages regarding encryption key generation also displays in the emulation space. After a host connect is established, host data displays in the emulation space according to host data attributes.

ClickPad

The ClickPad displays below the Emulation Space if enabled by the administrator as shown in Figure 9-66, on page 122. Click **Preferences>ClickPad** to access the ClickPad Configuration window.

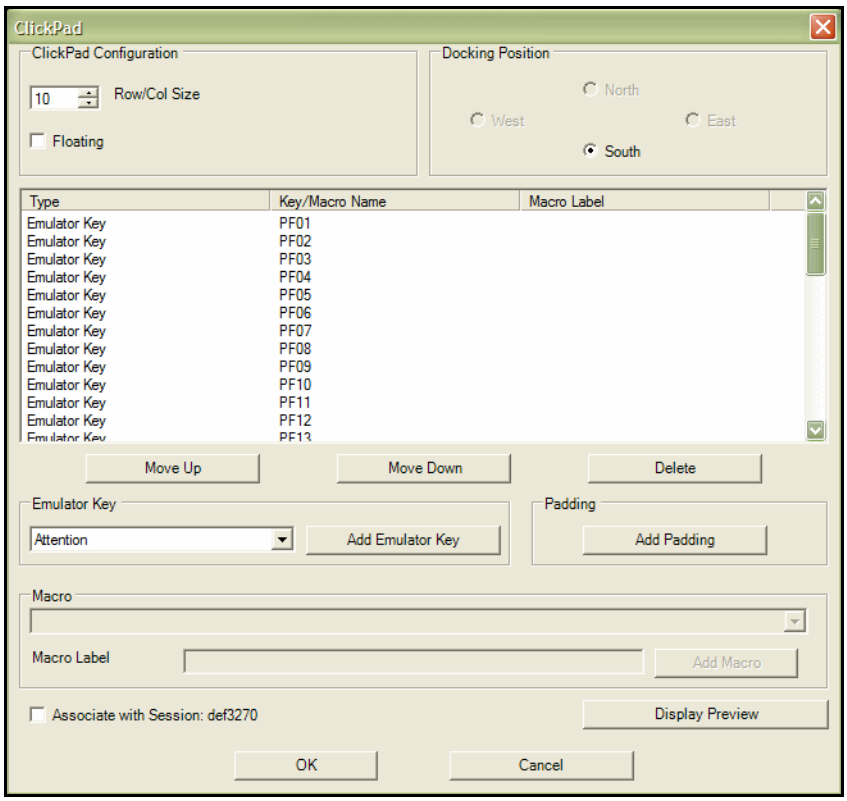


Figure 9-67: ClickPad Configuration

Copy and Paste Features

The copy/paste feature can be set for either *block* (copy/paste selected columns) or *stream* (copy/paste rows) mode by setting the Block Paste option under the **Preferences>Settings>Copy/Paste** menu. By default, this setting is block mode enabled. If disabled, the data is copied in stream mode.

Copy

To copy text to the clipboard, complete the following steps:

1. Mark the text by using one of the following copy methods:
   - **Select All** from the Edit menu: Selects the current screen and the entire contents of the scroll buffers.
   - Highlighting text using a mouse: Click and hold the left mouse button at the beginning of the text you want to copy. Drag the cursor to highlight the entire text you want to copy.
   - Highlighting text using the keyboard: Position the cursor at the beginning of text you want to mark and then use the key sequences in Table 9-13.
   - Double left mouse to select entire field.
2. Select **Copy** from the **Edit** menu or toolbar. The text is copied to the clipboard.

   You can use certain keys to highlight text on the screen, as defined in the following table.

Table 9-13: Keyboard Mapping

Key Sequence	Mapping
Shift + Left	Highlight the text to the left of the current select location.
Shift + Right	Highlight the text to the right of the current select location.
Shift + Up	Highlight the text above the current select location.
Shift + Down	Highlight the text below the current select location.
Shift + Home	Highlight the text to the beginning of the row of the current select location.
Shift + End	Highlight the text to the end of the row of the current select location.
Shift + Page Up	Highlight the text from the current cursor position to the first row on the screen.
Shift + Page Down	Highlight the text from the current cursor position to the last row on the screen.

These sequence functions are described below.

- Shift + Left: This marking function uses the shift key and left arrow key combination. If no text is selected, the current cursor position is selected. Otherwise, the character position to the left of the last selected character position becomes the new last character selected in the block. If the last selected character position is the beginning of a row, the last character of the previous row becomes the new last character selected.

- Shift + Right: This marking function uses the shift key and right arrow key combination. If no text is selected, the current cursor position is selected. Otherwise, the character position to the right of the last selected character position becomes the new last character selected in the block. If the last selected character position is the end of a row, the first character of the next row becomes the new last character selected.
- Shift + Up: This marking function uses the shift key and up arrow key combination. If no text is selected, the current cursor position and all characters up to but not including the character above the current cursor position is selected. Otherwise, the character position above the last selected character position becomes the new last character selected in the block. If the last selected character position is in the first row, the first character on the screen becomes the new last character selected. If Shift + Up is followed by a Shift + Down, the new last character selected is the position that was selected prior to the Shift + Up.
- Shift + Down: This marking function uses the shift key and down arrow key combination. If no text is selected, the current cursor position and all characters up to but not including the character below the current cursor position is selected. Otherwise, the character position below the last selected character position becomes the new last character selected in the block. If the last selected character position is in the last row, the last character on the screen becomes the new last character selected. If Shift + Down is followed by a Shift + Up, the new last character selected is the position that was selected prior to the Shift + Down.
- Shift + Home: This marking function uses the shift key and home key combination. If no text is selected, the current cursor position and all characters up to and including the first character in the row are selected. Otherwise, all characters from the last selected position to the first character in the row are selected unless it is already selected. If characters are already selected, then those characters are deselected.
- Shift + End: This marking function uses the shift key and end key combination. If no text is selected, the current cursor position and all characters up to and including the last character in the row are selected. Otherwise, all characters from the last selected position to the last character in the row are selected unless it is already selected. If characters are already selected, then those characters are deselected.
- Shift + Page Up: This marking function uses the shift key and page up key combination. When used, the current cursor position and all characters up to and including the first

character on the screen are selected. Any characters that were previously selected but are not in this range are deselected.

- Shift + Page Down: This marking function uses the shift key and page down key combination. When used, the current cursor position and all characters up to and including the last character on the screen are selected. Any characters that were previously selected but are not in this range are deselected.

Paste

To paste text from the clipboard to the screen, complete the following steps:

1. Position the cursor where you want to begin pasting text.
2. Select Paste from the Edit menu or toolbar.

> **Note:** You can reposition the cursor by selecting the Cursor to Mouse option in the **Preferences>Settings>Mouse** menu. Then click the position where you want to move the cursor.

Right-Click Menu

Many copy and paste tasks along with session switching can be accomplished using the right-click menu. Table 9-14 on page 130.

Table 9-14: Right-Click Menu

Item	Definition
Copy	Copy the highlighted text to the clipboard.
Copy and Append	Copy the highlighted text and append to the contents of the clipboard.
Paste	Insert text from the clipboard at the cursor position.
Select All	Select all text on page.
Move Curser Here	Cause curser to reposition at selection.
Print Selection	Send the selected text to the printer.
Switch to Session	Change focus to session selected from the pick-list.

3287 and 3812 Client Emulation Features

The 3287 and 3812 session user interface is a tab that shows the progress of 3287 and 3812 print jobs. A few user options can affect the printed output. These options, and other interface features, are explained below.

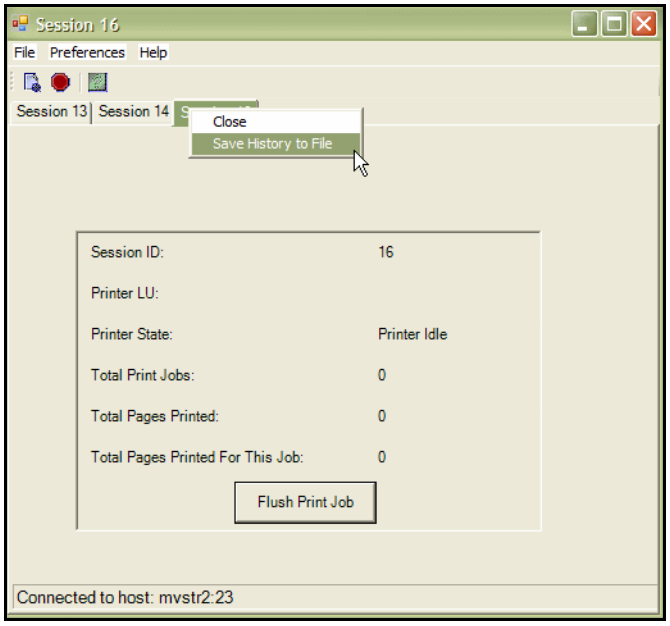


Figure 9-68: 3287 and 3812 Client Emulation

Menu Bar

The Menu Bar options are described in Table 9-15 below.

Table 9-15: 3287 Menu Functions (Sheet 1 of 2)

Menu	Item	Description
File	New Session	Opens a new 3287 session emulation tab.
	Save Setting	Saves the current user's settings.
	Session List	List all open sessions.
	Exit	Close session tab
Preferences	Setting	See Table 12-17 on page 169

Table 9-15: 3287 Menu Functions (Sheet 2 of 2)

Menu	Item	Description
Help	**About Session**	Select to view more information about the client operating system, applet version, .NET version and WebConnect Server.
Flush Print Job		Force End of Print Job

Session Window

Information displayed about the print job in the session window are:

- Session ID
- Printer LU
- Printer State
- Total Print Jobs
- Total Pages Printed
- Total Pages Printed For This Job.

Recording and Playing Macros

You can record frequently used keystrokes and save them as macros to be activated and played back. Defined macros are either saved locally or to the server, depending on the Save User Files On setting option in your User Preferences. See ”Preferences” on page 30. Select one of the following functions from the emulation session **File> Macro** menu:

- Play Macro
- Record Macro
- End Recording
- Cancel Macro

Note: In some instances, your system administrator may have set your user preferences to restrict macro recording. If this is the case your menu does not display the “Play Macro” feature as in the following figure. The same is true for the play macro toolbar icon.

Recording a Macro

To record a macro complete the following steps:

1. From the emulation session menu, click **File>Macro >Record Macro**.

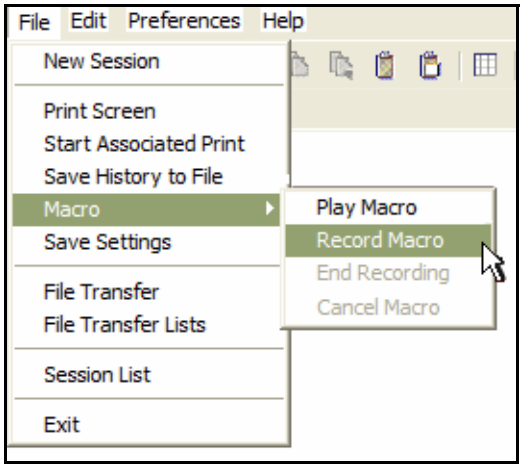


Figure 9-69: Record Macro

The New Macro Name dialog box appears as shown in Figure 9-70 below.

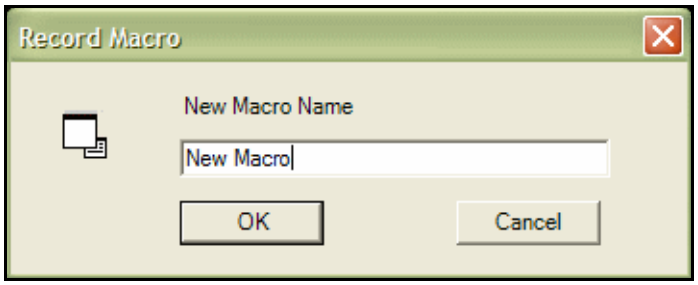


Figure 9-70: Record Macro Name

2. In the Macro Name box, type a name for the new macro (for example, **CICS Logon**).

3. Select the macro type from the pulldown menu.

4. Click **OK**.

5. Type the key sequence (i.e., the commonly used keystrokes) to record the macro.

Note: Do not use the mouse or clickpad while recording. Only keystrokes can be recorded, not mouse actions. See ”Copy and Paste Features” on page 127 for instructions on using the keyboard to highlight text. For a list of the key mappings, see About Keys from the emulation session Help menu.

6. When you have finished recording, click **File>Macro>End Recording**.

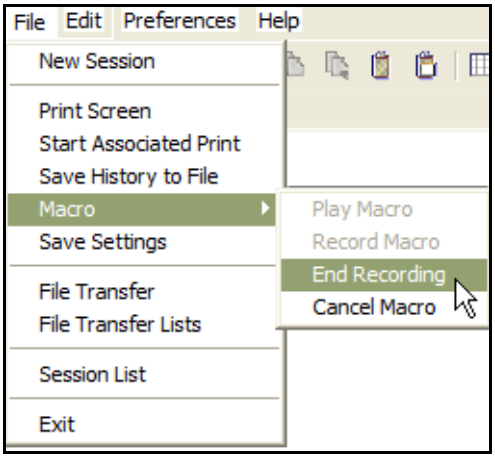


Figure 9-71: End Recording Macro

7. You will be prompted to save the new macro in the keyboard map file.

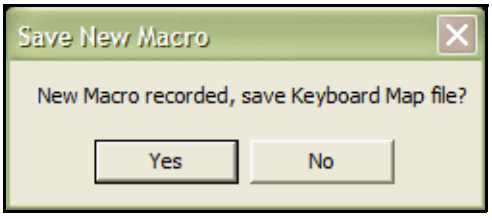


Figure 9-72: Save Recorded Macro

8. Click **Yes**.

   The macro you recorded and saved is available to replay the next time you start a session.

Playing a Macro

1. Select **File> Macro> Play Macro**.

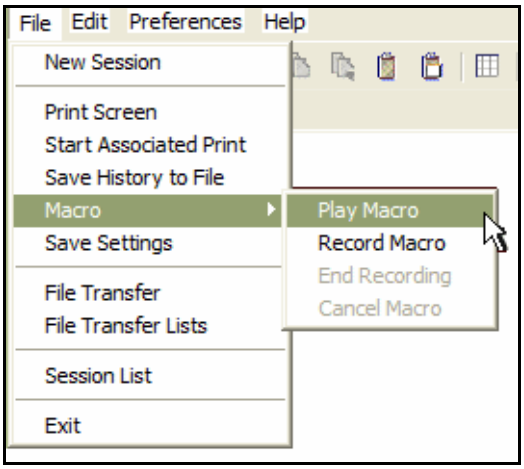


Figure 9-73: Play Macro Menu

The **Play Macro** window opens containing a list of available macros as shown in Figure 9-74, on page 135.

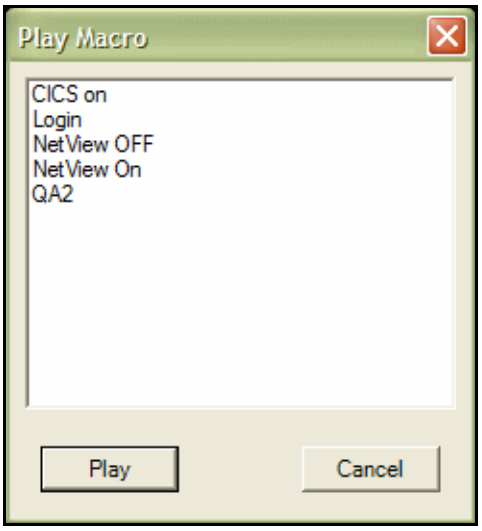


Figure 9-74: Recorded Macro List

2. Select the name of the macro that you want to play from the list.

3. Click **Play**. The macro keystrokes that you previously recorded automatically play back, activating the sequence.

> **Note:** For 3270, 5250, and VT sessions you can also play a macro from the Toolbar menu items. See, Table 9-12 on page 125.

Stopping a Macro During Play

This option stops a macro while it is running.

1. During a macro playback if a long time-out occurs and you need to stop it, select **Macro** and **Cancel Macro.**

Deleting a Macro

1. Select **Preferences>Keyboard Map**. The **Key Macro** window displays.

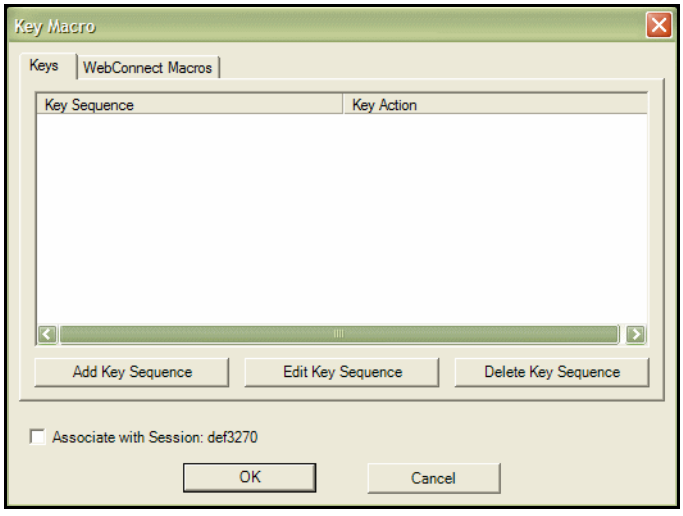


Figure 9-75: Key Macro Window

2. Click the WebConnect Macros Tab.
3. Select the macro to be deleted from the list.
4. Click **Delete Macro** to delete the macro as shown in Figure 9-76 below.

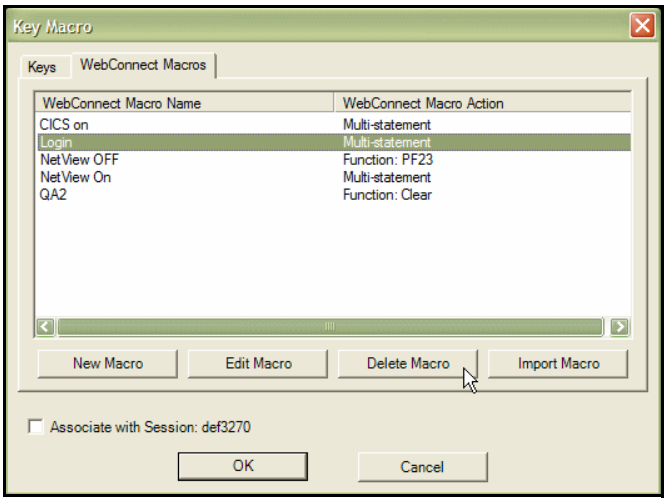


Figure 9-76: Delete Macro

5. Click **OK**.

Session List

If the WebConnect Administrator has enabled the Display Session List on Startup feature, clicking on a session type icon in the SESSION panel of the HTML user interface opens a session list window followed by the emulation session itself. Figure 9-77shows a Session List window with several sessions open.

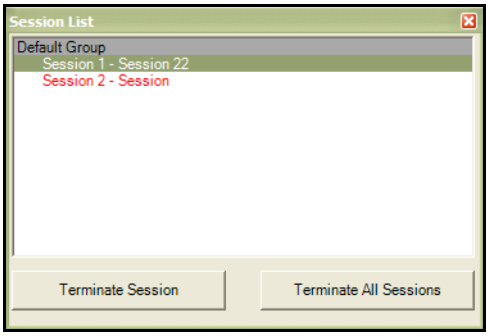


Figure 9-77: Session List

The session list provides the means to manage multiple open sessions. It displays a list of all active sessions identified by their session ID number. Your WebConnect administrator can specify custom group names. In this case, sessions will be listed by group name. Sessions that have been terminated due to network conditions

or by the WebConnect Server are listed in red. Sessions can also be individually or collectively stopped by using the Terminate Session or the Terminate All Sessions buttons.

The Session List window can also be enabled by selecting **File>Session List** from the session menu.

> **Note:** Do not use Pop-up Window Blockers as they can prevent the JRE placeholder window from starting. Disable all Pop-up Window Blockers

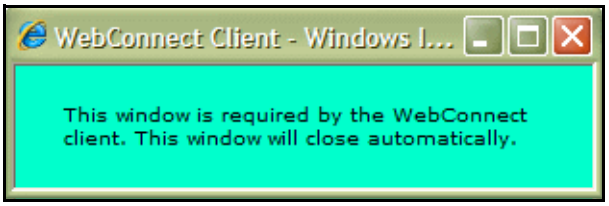


Figure 9-78: .NET Placeholder

The .NET placeholder window will open and then close automatically as the session starts.

10 .NET Client Printing

Printing a Screen

You can print a single session window after you select a print screen option, see the following steps:

1. From the open session window, select **File>Print Screen** from the menu. The printer dialog window for the system displays. If the “Print to File” option has been configured it opens instead.

2. Follow the system printing procedures.

Printing Part of a Screen

To print a portion of the window text, highlight the desired area then right click and choose **Print Selection**. A printer dialog will display.

VT Session Logging

Activity during a VT session can be recorded in two different ways.

- Log Session to Printer - text displayed on the VT session is echoed to the printer.
- Log Session to File - text displayed on the VT session is echoed to the user selected file.

  Simultaneous logging to file and printer are not allowed.

When the user enables session logging, the applet sends a command to the WC server to start logging. The VT emulation in the server manages accumulation of log data and sends each line to be logged to the applet.

While logging, each printable character received is stored in a buffer in the WC server. The buffer is flushed to the applet for printing whenever the carriage return (CR) character is received from the host. Tab characters are expanded in the buffer for proper alignment of tabbed data in the printer log.

If host-initiated VT print (printer controller on) is started, the current logging buffer is flushed and logging suspended. Logging resumes when the print controller off sequence is received. Printer controller data is spooled to a separate print job by the applet to prevent mixing of printer controller data and session logging data.

The session logging feature uses the same applet print method configured for screen print and printer controller mode. This is configured in the session file or in the user's preferences.

VT Log Session to Printer

To use Session Logging complete the following steps from the session screen:

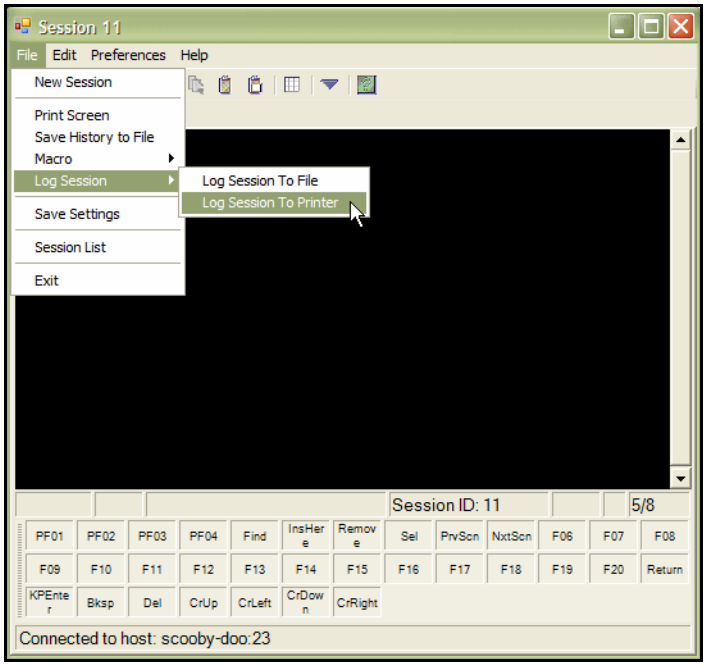


Figure 10-79: Log VT Session to Printer

1. Select **File>Log Session>Log Session to Printer**

   A print dialog box appears.

2. Check the print settings, make changes as necessary, and click **OK**.

3. Continue with your session.

Data entered is stored in the print buffer until you are ready to print.

4. To print the accumulated session activity click **Files>Log Session>Log Session to Printer** again.

   Your session is sent to your selected printer and session logging is disabled.

VT Log Session to File

To use Session Logging complete the following steps from the session screen:

1. Select **File>Log Session>Log Session to File**

   The Specify Session Log Filename dialog box appears.

2. Enter a filename for the session log and click **OK**.

3. Continue with your session.

   Data entered is stored in the session log file.

4. To discontinue session logging click **Files>Log Session>Log Session to File** again.

3287 Print Session

Printing from any browser to a specific 3287 logical unit (LU) and gateway:

1. Select **3287 Print Session** from the *Start User Session panel*. A 3287 printer session window displays.

2. Be sure the correct LU displays in the printer session window.

3. Send a mainframe print job to the selected LU. The 3287 printer session window indicates that the session is printing.

> **Note:** To check the LU and gateway you are printing to, select About Session from the Help menu on the printer session window displayed when you start a 3287 print session. A session status window will open identifying printer. To run print jobs unattended, disable **Show Printer Dialog** from the session settings menu.

11 .NET Client File Transfer

WebConnect uses the standard IND$FILE protocol to transfer files between a .NET client and an SNA host application. This capability can be used to address a variety of networking needs, including centralized data backups and data warehousing through an SNA host.

Note: The 3270 File Transfer menu option is only available if it is enabled by your administrator.

Because SNA host files use different file formats from WebConnect files and .NET client files, be sure to use the appropriate options for converting files to the receiving host's file format during transfer. Format conversion allows the receiving host applications to use the file without further modification. SNA hosts and SNA applications used for transferring files are listed below as well as the IBM program number and operating system for each application:

Table 11-16: SNA Host/Application Transfer

Application Program	Program Number	Operating System
3270 PC File Transfer for CICS	5798-DQH	VS
3270 PC File Transfer for TSO	5665-311	MVS
3270 PC File Transfer for VM	5664-281	VM

- WebConnect supports only the DFT (Distributed Function Terminal) file transfer mode.

You must be familiar with the file transfer application program you use.

Select an option below for file transfer instructions:

- "Sending and Receiving CICS/VS Files" on page 144
- "Sending and Receiving TSO Files" on page 146
- "Sending and Receiving VM Files" on page 150
- "Multiple File Transfers" on page 153

Sending and Receiving CICS/VS Files

WebConnect allows file transfer between a .NET client and the Customer Information Control System/Virtual Storage (CICS/VS) SNA application.

See the following steps to transfer files to and from CICS/VS.

1. Make sure that the WebConnect client is connected to the desired SNA host and CICS application.
2. From the File menu, select **File Transfer >To Host** (or **From Host**). The appropriate file transfer window will display.
3. Select the **CICS** tab.

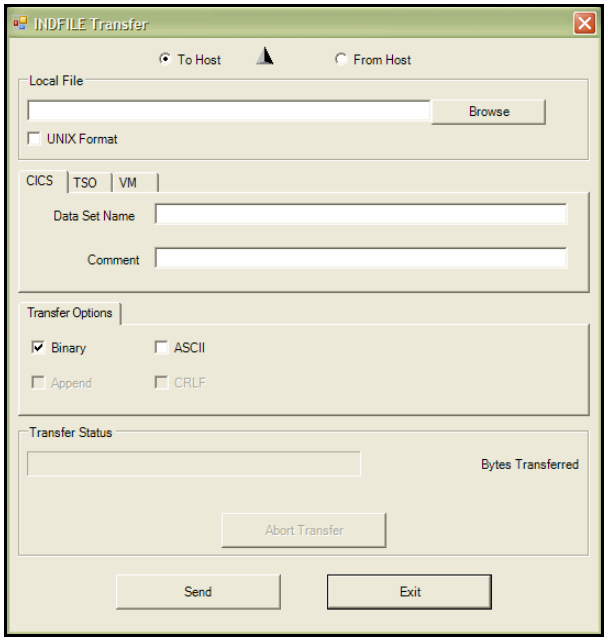


Figure 11-80: CICS Tab

4. Under **Local File** click **Browse** to search for a file. A file selection window will display.

> **Note:** The procedures for searching for filenames will vary by system.

When you select a file the name will display in the text field of the Local File box.

UNIX Format

1. To transfer the file in UNIX format, click the UNIX Format button under Local File. UNIX format converts line separators to carriage return and line feed pairs during a Send operation. During a receive operation, carriage return and line feed pairs are converted to line separators.

   Do not select the UNIX format when using the binary option or the binary data will be corrupted.

2. Type a host filename in the Data Set Name field in the CICS tab.

Note: The CICS filename can be a program name, a transaction identification, or identification selected by the CICS/VS application programmer. If the filename does not exist, the CICS/VS application will automatically create it. The filename can be one to eight characters long. The character in the first position must be alpha; other characters can be alpha or numeric.

3. Type comments about the file being transferred in the Comment field in the CICS tab. The comments will be automatically included in the first record of the CICS/VS host file.

Transfer Options

1. Select a file type from the Transfer Options box to configure the way the file contents are treated during the transfer process. The choices are described below:

   - ASCII
     This option instructs the SNA host to translate data between the EBCDIC and ASCII character formats. Use this option for transferring ASCII formatted files, such as text edit files or print files. Do not use the ASCII option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
   - Binary
     This option instructs the SNA host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.

2. Click Append if a local file is to be added to the end of an SNA host file or if an SNA host file is to be appended to a local file.

   - If you do not select Append in the Receive dialog box, the SNA host file will replace the .NET client file.

- If you do not select Append in the Send dialog box, the TCP/IP host file will replace the SNA host file.

3. If the CRLF option is desired, check CRLF.

> **Note:** If you do not specify the CRLF option in send mode, the SNA host disregards the local file's line separators.
>
> Do not use the CRLF option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
>
> Disabling the CRLF option in the Transfer Options dialog box instructs the CICS/VS host to copy the file unaltered to the appropriate TCP/IP host. This option can be used to transfer encrypted data, compiled programs, and other data that is unreadable.

4. Click **Send** or **Receive** to begin the file transfer.

5. Transfer Status will display at the bottom of the dialog to confirm the transfer was successfully completed. Click **Exit**.

Sending and Receiving TSO Files

WebConnect allows you to transfer files between a .NET client and the Time Sharing Option (TSO) SNA application.

See the following steps to transfer files to and from a TSO application from a User Session.

1. Make sure that the WebConnect client is connected to the desired SNA host and TSO application.

2. Select **File Transfer>To Host** (or From Host and the TSO tab).

3. Click the TSO tab. The appropriate file transfer window will display.

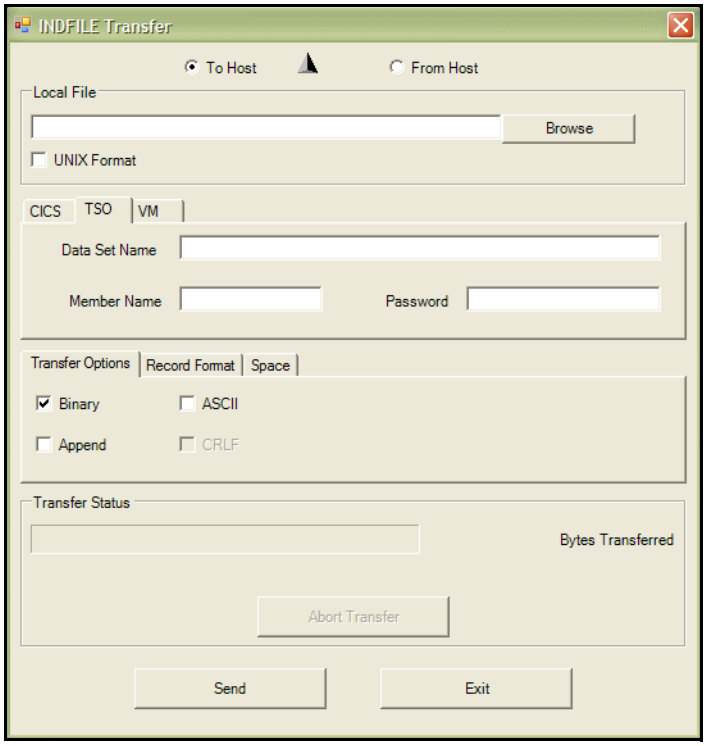


Figure 11-81: TSO File Transfer Example

4. Click Browse under Local File to search for the peer's file. A file selection window will display. The procedures for searching for the peer filename may differ by system.

5. When you select the peer file and click Open, the name will display in the text field in the Local File box.

6. To transfer the file in UNIX format, click the UNIX Format button. UNIX format converts line separators to carriage return and line feed pairs during a Send operation. During a receive operation, carriage return and line feed pairs are converted to line separators.

7. Type a host filename in the Data Set Name field.

8. Type a member name in the Member Name field.

Note: The TSO host data set name must conform to IBM naming conventions. You can enter an existing data set name (stored in your library) or a new data set name. A closing quote will not display in the Member Name field.

The member name is optional. If entered, the member name should be a member in a partitioned data set directory.

9. WebConnect does not create the partitioned data set. When you use the Send window to copy a file to a partitioned data set and include a member name, the partitioned data set must exist.

10. The TSO application adds a user ID prefix to the combined data set and member name. To eliminate the user ID prefix, enclose the data set and member name in single (right) quotation marks, for example,'smith.pds2.file1.'

11. If a password is required, type it in the Password field. A password is only required if password-protection has been specified for the TSO data set.

12. Select a file type from the Transfer Options box to configure the way the file contents are treated during the transfer process. The choices are described below:
    - ASCII—this option commands the SNA host to translate data between the EBCDIC and ASCII character formats. Use this option for transferring ASCII formatted files, such as text edit files or print files. Do not use the ASCII option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
    - Binary—this option instructs the SNA host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.

Note: If you select the UNIX Format option when using the Binary option, the binary data will be corrupted.

Append a File

1. Click Append if you plan to add a local file to the end of an SNA host file, or you will append an SNA host file to a local file. The Append option will override other values specified by the LRECL parameter and RECFM options in the Record Format section.
    - If you do not select Append in the Receive dialog box, the SNA host file will replace the Java client file.
    - If you do not select Append in the Send dialog box, the TCP/IP host file will replace the SNA host file.

Record Format and Space Options

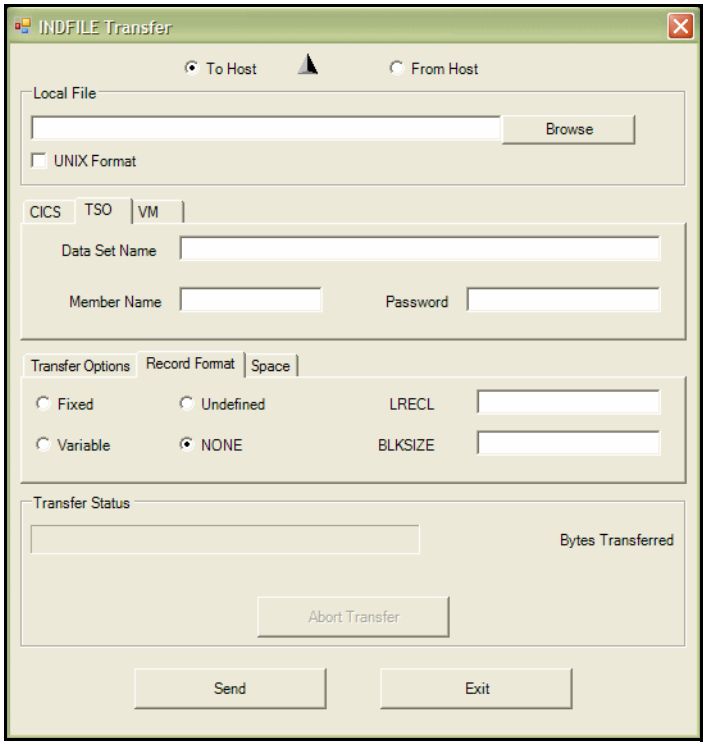


Figure 11-82: Record Format Options

1. In the Record Format tab, click a radio button for the desired record format. This is only valid when sending a file. The valid values are described below:
   - Fixed—indicates the data set's records are fixed length.
   - Variable—indicates the data set's records are variable length.
   - Undefined—indicates the data set contains undefined record lengths.
   - None—indicates no record format is to be used.
2. If sending a file, type a size value (such as the data block size of a TSO data set) in the BLKSIZE field in the Record Format area. The variable you type represents a data block's byte count. The default value is 80.
3. Type a logical record length value of the SNA host file in the LRECL field in the Record Format area. The parameter value represents the number of characters for each record. If the parameter is not entered, the record length is determined by the file transfer operation. For new files, the parameter's default value is 80.

4. The characteristics of the existing file are used if you are replacing a file or appending information to a file. If you are transferring variable length records, the parameter represents the maximum record size. The parameter's value becomes the longest record sent if you do not send a record of the maximum operating system size; only valid if you are sending a file.

5. Click **Send** to begin the file transfer.

6. To set the allocated amount of space for a new data set, click Blocks, Tracks, or Cylinders in the Space tab. When you select Default, TSO uses the Blocks parameter default value which is determined by the specifications listed below:
   - Blocks—use the smallest storage entity.
   - Tracks—use the middle-sized storage entity.
   - Cylinders—use the largest storage entity.
   - Primary—the primary allocation for the Blocks parameter.
   - Increment—the increment allocation for the Blocks parameter.

7. Transfer Status will displayed at the bottom of the dialog to confirm the transfer was successfully completed. Click **Exit**.

Sending and Receiving VM Files

WebConnect allows file transfer between a .NET client and the Virtual Machine/Conversational Monitor System (VM) SNA application.

See the following steps to transfer files to and from a VM application.

1. Make sure that the WebConnect client is connected to the desired SNA host and VM application.

2. From the File menu, select **File Transfer>To Host** or **From Host** and the VM tab.

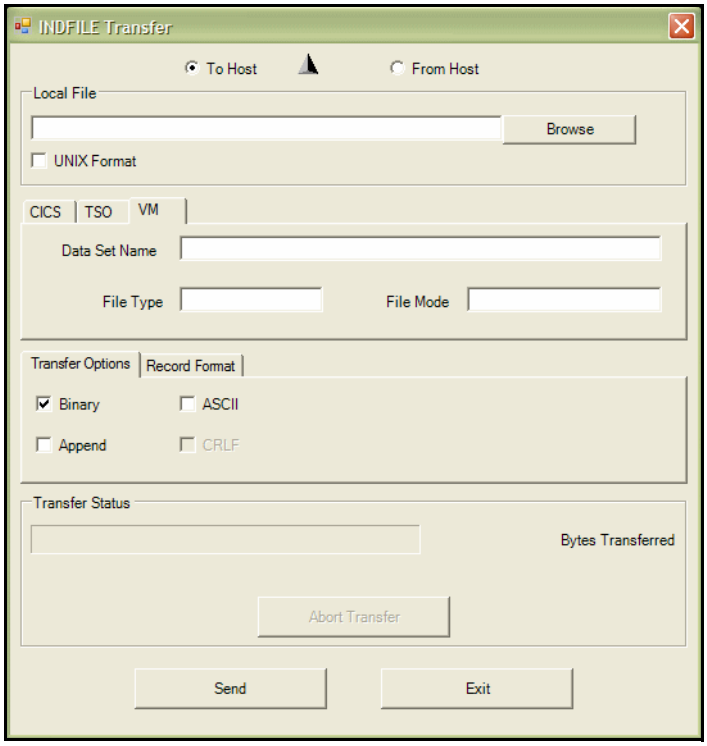


Figure 11-83: TSO File Transfer Example

3. Click **Browse** under **Local File** to search for the peer's file. A file selection window displays. The procedures for searching for the peer filename vary by system.

4. Select the peer file. The name displays in the text field in the Local File box.

   To transfer the file in UNIX format, click the UNIX format button. UNIX format converts line separators to carriage return and line feed pairs during a Send operation. During a receive operation, carriage return and line feed pairs are converted to line separators.

5. Type a host filename in the Data Set Name field in the VM tab. The VM filename can be one to eight characters long.

Note: The VM application automatically creates the receiving host's filename if a filename does not exist.

6. Type the appropriate file type in the VM File Type field. This parameter identifies the VM disk file type.

7. Type an appropriate value in the VM File Mode text box. This parameter identifies the VM disk file mode. If you do not enter a file mode parameter, the VM application uses the A1 default value.

8. Select a file type from the Transfer Options box to configure the way the file contents are treated during the transfer process. The choices are described below:
   - ASCII—this option instructs the SNA host to translate data between the EBCDIC and ASCII character formats. Use this option for transferring ASCII formatted files, such as text edit files or print files. Do not use the ASCII option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
   - Binary—this option instructs the SNA host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.

Caution: Do not select the UNIX Format option when using the Binary option or the binary data will be corrupted.

9. Click Append if a local file is to be added to the end of an SNA host file or if an SNA host file is to be appended to a local file.
   - If you do not select Append in the Receive dialog box, the SNA host file replaces the Java client file.
   - If you do not select Append in the Send dialog box, the TCP/IP host file replaces the SNA host file.
   - To use the CRLF option, check CRLF.

Note: You can click the UNIX Format check box for ASCII file transfers. This allows line separators to be converted to carriage return and line feed pairs during a Send operation.

   - During a Receive operation, carriage return and line feed pairs are converted to line separators.
   - Disabling the CRLF option in the Transfer Options dialog box instructs the VM host to copy the file unaltered to the appropriate TCP/IP host. This option can be used to transfer encrypted data, compiled programs, and other data that is unreadable.
   - If you do not activate the Append option in the Receive dialog box, the SNA host file replaces the Java client file. If you do not

activate the Append option in the Send dialog box, the TCP/IP host file replaces the SNA host file.

> **Caution:** Do not use the ASCII or CRLF options for binary data such as output data from a data base program or object code files such as C compiler object code.

10. To specify the record format, LRECL, click the **Record Format** tab.

11. In the Record Format area, click a radio button for the desired record format. This is only valid when sending a file. The valid values are described below:
    - Fixed—indicates the data set's records are fixed length.
    - Variable—indicates the data set's records are variable length.
    - Undefined—indicates the data set contains undefined record lengths.
    - None—indicates no record format is to be used.

12. Type a logical record length value of the SNA host file in the LRECL field in the Record Format area. The parameter value represents the number of characters for each record. If the parameter is not entered, the record length is determined by the file transfer operation. For new files, the parameter's default value is 80.

    If you are replacing a file or appending information to a file, the characteristics of the existing file will be used. If you are transferring variable length records, the parameter represents the maximum record size. If you do not send a record of the maximum operating system size, the parameter value becomes the longest record sent. This is only valid if you are sending a file.

13. Click **Send** to begin the file transfer.

14. Transfer Status will display at the bottom of the dialog to confirm the transfer was successfully completed. Click **Exit**.

Multiple File Transfers

The WebConnect applet supports IND$FILE multiple file transfers. You can create and add files to a multi-file list, then transfer them as a group of files. These lists can be saved, edited and deleted from this menu.

Please refer to ”Sending and Receiving CICS/VS Files” on page 144 for basic file transfer procedures and windows.

1. Select **File>File Transfer Lists** from the applet menu.
2. Select the **Host Environment of either CICS, TSO, or VM.**

   Any lists you have previously saved will display.

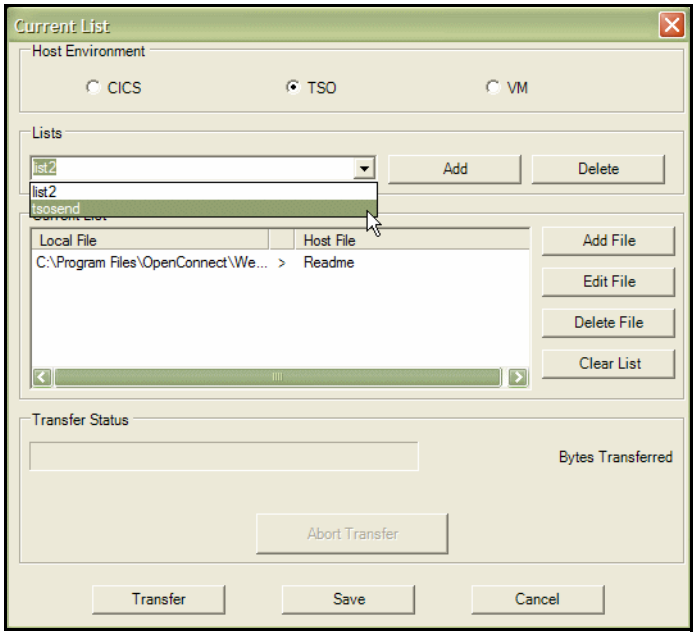


Figure 11-84: Lists

3. Type a new list name and click **Add**.
4. Click **Add File** in the Current List area of the window. The INDFILE Transfer box displays.

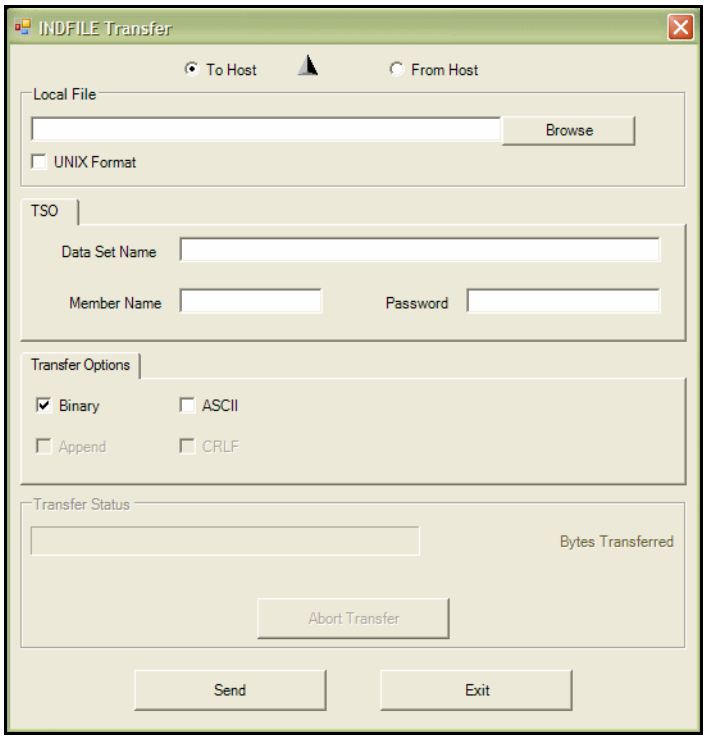


Figure 11-85: INDFILE Transfer

5. Select **To Host** or **From Host**.
6. To select a local file, click the Browse button.
7. Name the file in the *Data Set Name* field and select other appropriate data.
8. Click **Send** or **Receive** to add this file to the list.
    a. To clear the list, click the **Clear List** button.
    b. To define and save the list, click **Save**.
    c. To delete a file from the list, select a file in the list and click **Delete File**.
    d. To replace a file in the list, select a file in the list and click **Edit File**.
9. When all the files you want to transfer are in the Current List area click **Transfer**.

    Transfer Status will display at the bottom of the dialog to confirm the transfer was successfully completed. Click **Cancel**.

12 .NET Client User Preferences

This chapter contains information about editing user emulation session preferences from the menu bar of the Emulator Screen. The following topics are covered:

- ”Preferences Menu” on page 158
  - ”Configuring Colors” on page 158
  - ”Configuring Attributes” on page 165
  - ”Configuring the ClickPad” on page 159
  - ”Configuring Hot Spots” on page 167
- ”The Settings Menu” on page 169
  - ”Cursor Options” on page 172
  - ”Type-ahead” on page 173
  - ”Move Cursor with Mouse (Light Pen)” on page 174

Preferences Menu

This section contains information about the options available from the **Preferences** menu on the Emulation Client menu bar that control.

Configuring Colors

1. To change or enhance the color configuration, select **Preferences>Colors** from the menu.

Figure 12-86: Edit Color Configuration

2. To edit a color, doubleclick the color you want to change.

   The color chooser dialog box appears.

3. Click on one of the basic colors or create a custom color and click **OK**.

> **Note:** The **Associate with session:** box allows you to associate the color values with your user ID and the session file name. When selected, the settings will apply to all sessions that you start with the same WebConnect session file. For example, using userid and 3270, the user's local filename will be userid.cm3. If saved for the specific session (as in def3270 for this example), the filename would be userid-def3270.cm3.

4. Repeat as necessary and then click **OK**.

> **Note:** To assign or change a specific attribute color, see Configuring Attributes below.

Configuring the ClickPad

Each emulation session type (3270, 5250 and VT) has an associated ClickPad for that session type. .NET clients have a feature listed under the Preferences Menu called **ClickPad**. Options under this feature allow users to customize the clickpad for their personal use. The user can add or delete keys, add macros, insert padding (blank buttons) to separate keys into groups and rearrange the ClickPad to the user's display preference.

When customizing, the user can apply the custom clickpad to all like session types, meaning all 3270 sessions or all 5250 sessions etc., or assign the custom clickpad to a particular session, solely for use with that particular session.

ClickPad Configuration: Row/Col Size and Docking Position

The Row/Col Size box allows the user to determines the rows displayed. The .NET client only supports the one docking position, therefore the other directions are greyed out.

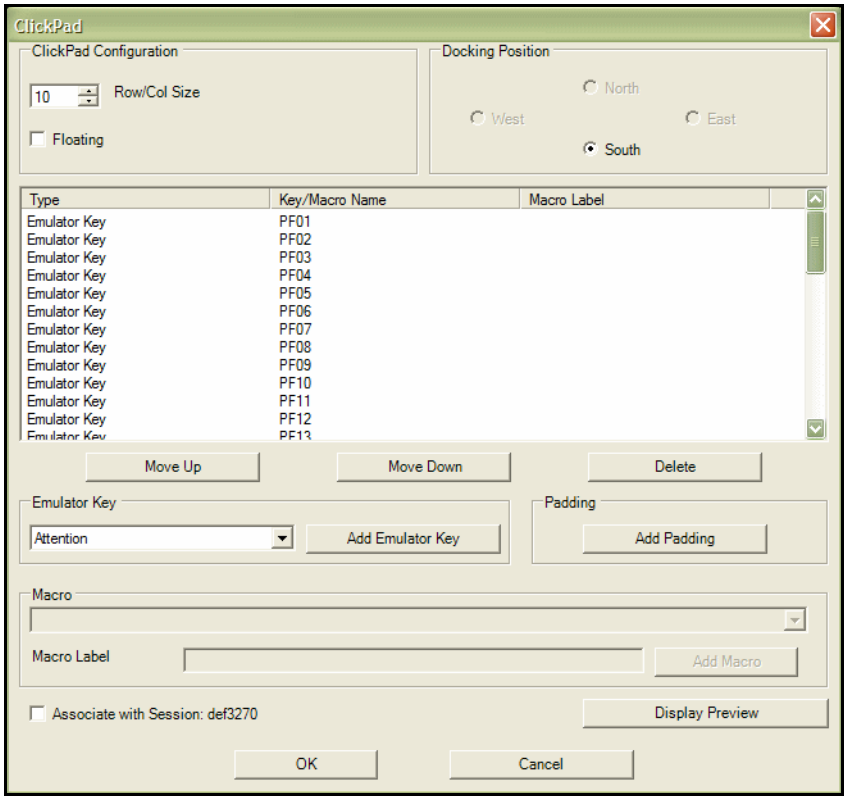


Figure 12-87: ClickPad Configuration

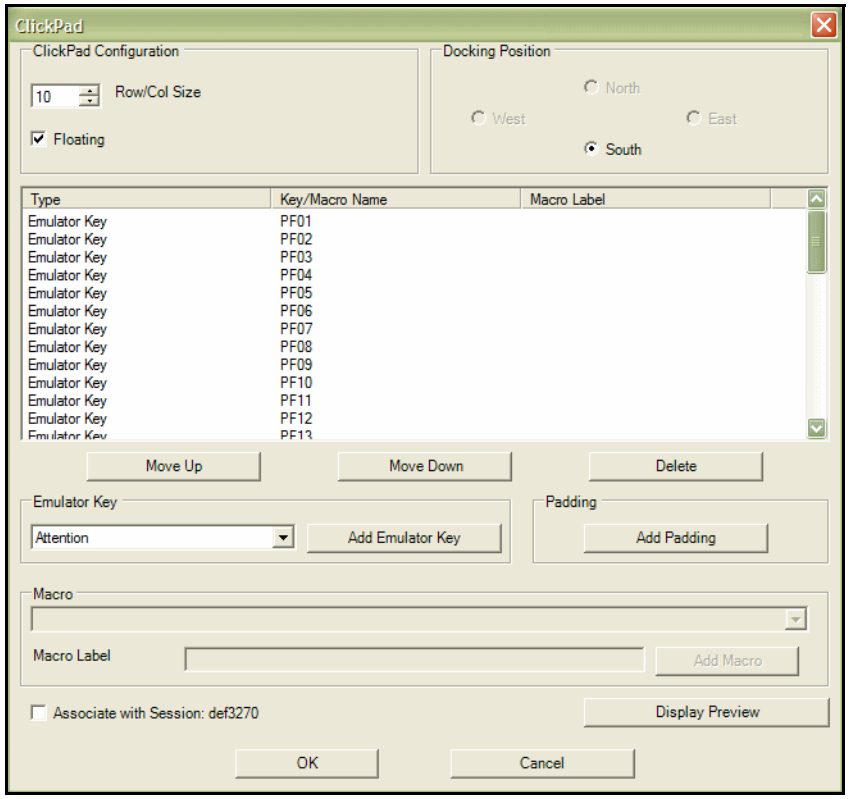


Figure 12-88: Floating Enabled

Floating

When the Floating checkbox is enabled, the ClickPad is totally detached from the session screen allowing the user to position it anywhere on their desktop display. The Floating ClickPad window will only be displayed when the associated session has focus on the screen.

To bring it back to the session, click on the **x** in the upper right hand corner and the ClickPad will return to its original position.

Emulator Keys: Move Up, Move Down and Delete Buttons

Each emulator type (3270, 5250 or VT) will automatically accommodate the normal clickpad keys associated with the type of session.

The **Move Up** and **Move Down** buttons provide the user with the ability to rearrange the layout of the ClickPad. To do this, simply place the cursor over the key that you want rearranged and use the **Move Up** and **Move Down** buttons to position the key to the desired location.

The **Delete** button provides the ability to remove keys from the ClickPad.

Note: All associated standard session keys are also stored in the Emulator Key section, so if you accidentally *delete* a standard session key, you can always *add* it back.

Emulator Key Section

The Emulator Key drop down box contains a list of emulation keys for selection.

As stated earlier, all relative session type standard keys are in this list as well as some additional keys that might be desired. After making a selection, press the Add Emulator Key button to add the selected key to the ClickPad.

Padding

The Add Padding button is used to place padding (blanks or spacers) between sets of keys. In the example below, an Add Padding button was placed after PF24 to separate the PF keys from the PA keys and two **Add Padding** button was placed before the first macro key to place macros in their own row. See Figure 12-89 below.

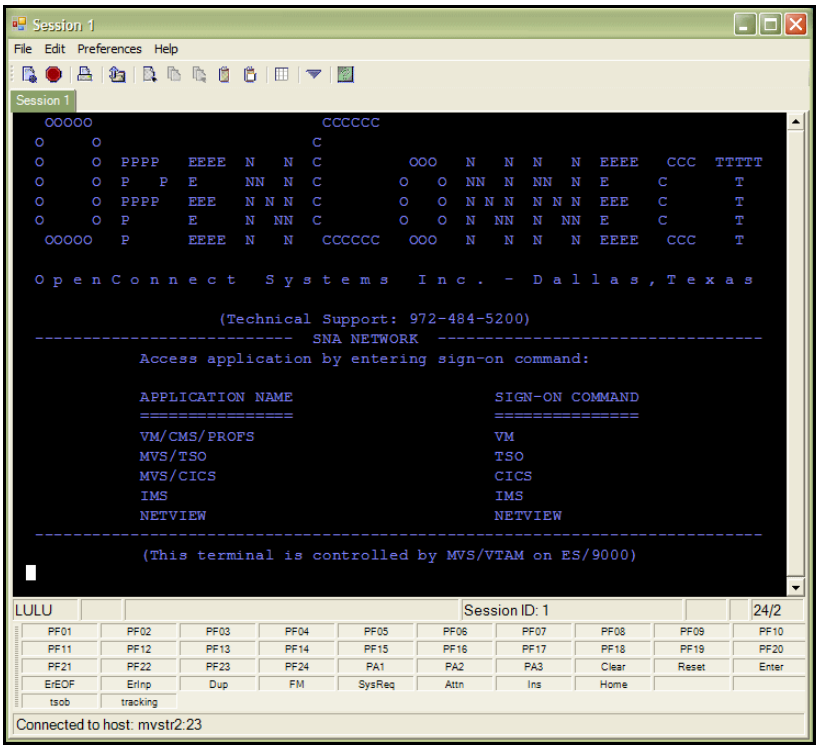


Figure 12-89: Padding

Macro Section

If you have created macros and would like to add a button on the clickpad for a macro, select the desired macro from the Macro drop down box, optionally, assign it a key label in the Macro Label box and click **Add Macro**. Use the **Move Up** and **Move Down** buttons for key placement on the ClickPad.

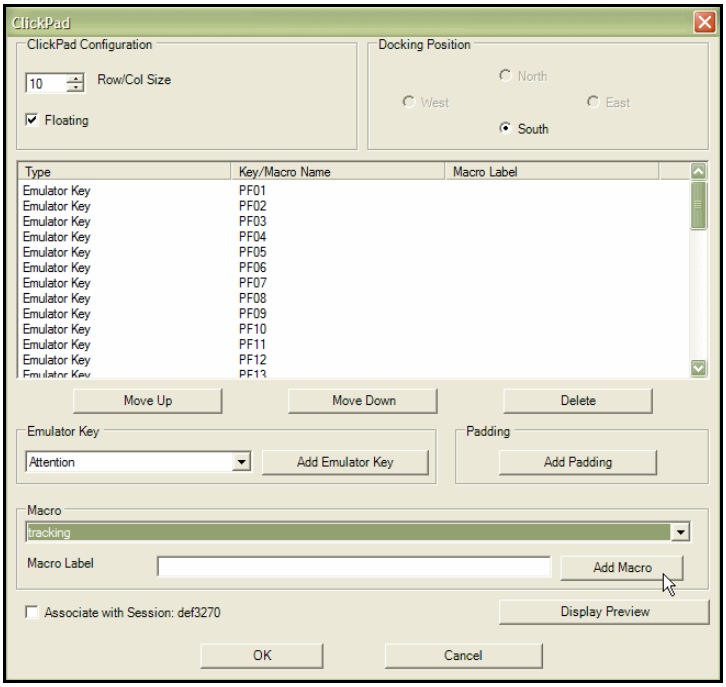


Figure 12-90: Add Macro

Display Preview

Clicking on the Display Preview button will display a preview screen of what the ClickPad will look like prior to selecting the **OK** button.

If all looks well, simply close the window on the preview screen with the **x** button in the upper right hand corner and click the **OK** button.

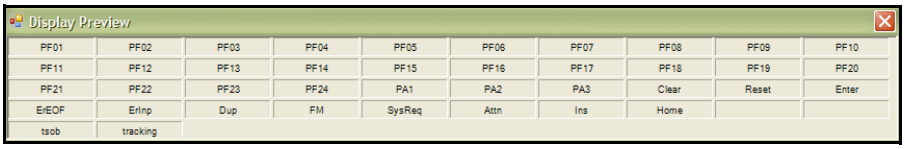

Display Preview
PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08 PF09 PF10
PF11 PF12 PF13 PF14 PF15 PF16 PF17 PF18 PF19 PF20
PF21 PF22 PF23 PF24 PA1 PA2 PA3 Clear Reset Enter
ErEOF Erlnp Dup FM SysReq Attn Ins Home
tsob tracking

Figure 12-91: Preview

If the outcome was not as desired, close the preview window and continue customizing your ClickPad.

Note: Note: The **Associate with session:** option allows you to associate the clickpad values with your *user ID* and the session file name. When selected, the settings will apply to all sessions that you start with the same WebConnect session file type. For example, using userid and 3270, your local filename will be userid.ck3. If saved for the specific session (as in def3270 for this example), the filename would be userid-def3270.ck3.

Configuring Attributes

Various screen behaviors associated with fields can be configured through the Attributes panel. Complete the following steps to edit your screen attributes and colors.

1. Select **Preferences>Attributes**.

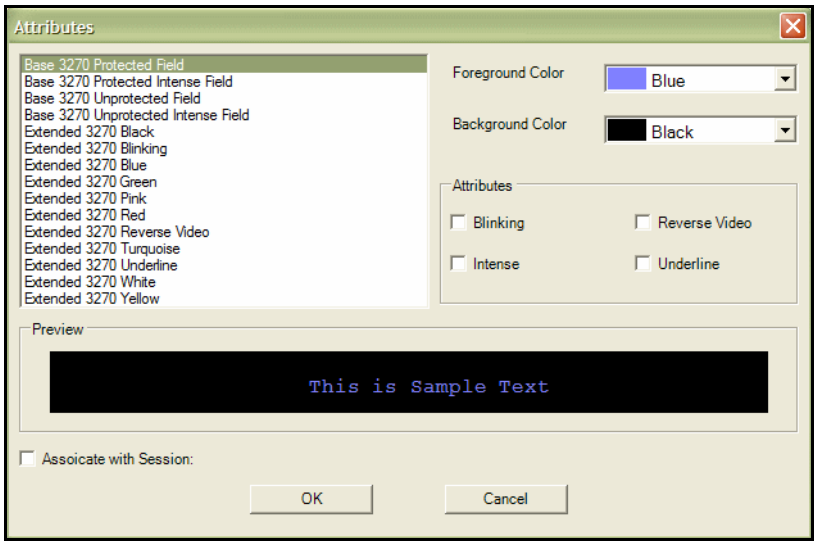


Figure 12-92: Attribute Configuration

2. The attribute configuration window displays an example of attributes supported by the terminal type (3270/5250/VT).
3. Select an attribute from the list.
4. Select a Foreground and Background color from the drop-down lists.

5. Select an Attribute such as Blinking, Reverse Video, Intense, or Underline if desired.

Note: The **Associate with session:** box allows you to associate the attribute values with your *user ID* and the *session file* name. When selected, the settings will apply to all sessions that you start with the same WebConnect session file. For example, using userid and 3270, the user's local filename will be userid.at3. If saved for the specific session (as in def3270 for this example), the filename would be userid-def3270.at3.

6. Click **OK** when you complete the changes.

Note: To change the color configuration, see ”Configuring Colors” on page 158.

Configuring Hot Spots

Hot Spots configuration allows you to select and display the definition of text strings as clickable buttons when the strings appear on the screen.

Complete the following steps to set or modify hot spots.

1. Start your client session.

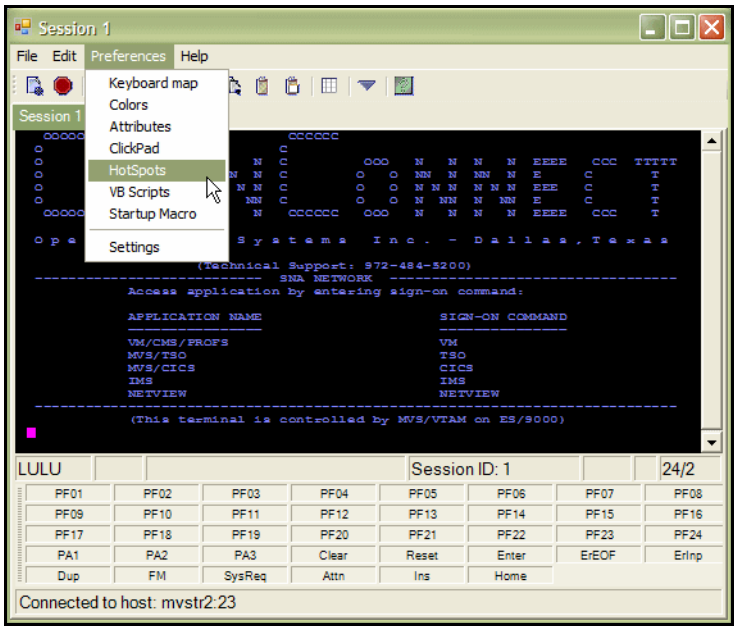


Figure 12-93: Edit User Preferences

2. Select **Preferences>Hot Spots** from the Menu.

   The Hot Spot Configuration screen displays.

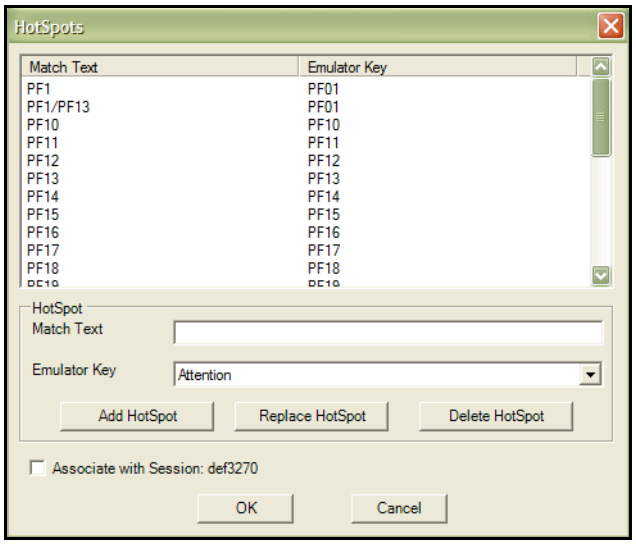


Figure 12-94: Configure Hot Spots

3. To edit existing HotSpot:
   a. Highlight the **Emulator Key** you wish to edit.
   b. Enter new text into the **Match Text** field.
   c. Click **Replace HotSpot**.
4. To add a New HotSpot:
   a. Type the text into the **Match Text** field
   b. Select an **Emulator Key** from the pull-down menu.
   c. Click **Add HotSpot**.
5. Repeat the preceding steps for each hot spot change you want to make.

> **Note:** The **Associate with session:** option allows you to associate the hot spot values with your user ID and the session file name. When selected, the settings will apply to all sessions that you start with the same WebConnect session file. For example, using userid and 3270, your local filename will be userid.hs3. If saved for the specific session (as in def3270 for this example), the filename would be userid-def3270.hs3.

6. Click **OK**.

The Settings Menu

This section contains information about the options available from the **Preferences>Settings** menu on the Emulation Client menu bar.

The Settings window appears when **Preferences>Settings** is selected.

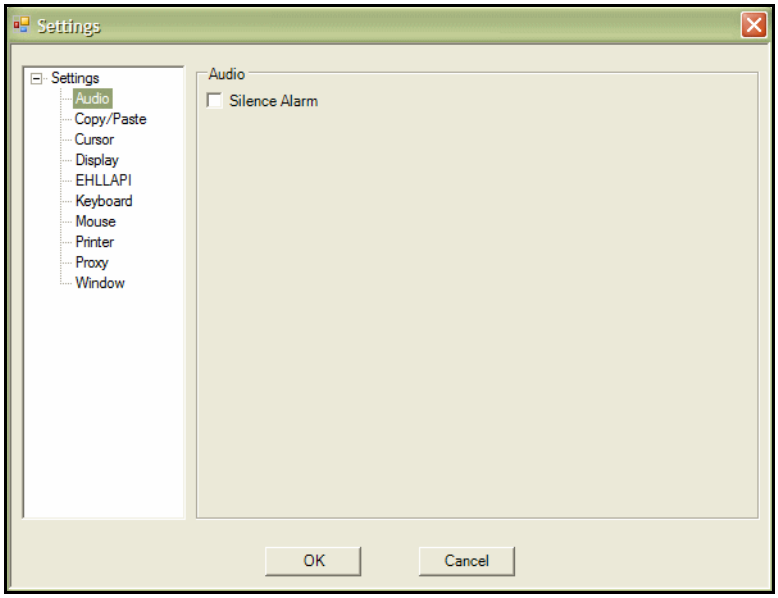


Figure 12-95: Settings

Table 12-17: Settings Options (Sheet 1 of 3)

Menu	Item	Definition
Audio	Silence Alarm	Disable Audio Alarm
	Please Select a Sound Event for Emulation Beep	Use the default WebConnect Beep or choose an alternative from the list. Note: Sounds must be configured in OS prior to use by WebConnect.
Copy/Cut	Stream	Copy/Cut all fields between the beginning of the selection and the end of the selection.
	Block	Default mode. Copy/Cut the columns inside the selection rectangle.
	Suppress Trailing Carriage Return on Copy	Removes last CR from copied text.

Table 12-17: Settings Options (Sheet 2 of 3)

Menu	Item		Definition
Paste	Stream		Characters from the paste buffer are processed as if typed by the user and advance from field to field based on the screen's layout.
	Block		Attempts to paste the buffer onto the screen in a one-to-one model. Each line of the data maps to one row of the screen. Each character in that line is placed in the corresponding location on the screen if the location is *unprotected*.
	Hybrid		Block paste with word wrapping. Paste starts at the current cursor location; all continuing fields will start at the same column location. If starting cursor location is a protected field the paste is terminated. Word and rest of the line are wrapped to next field(s) if it can not fit in current field.
	Paste By Fields (Stream/Hybrid Only)		Disabled by default. When enabled WebConnect detects TAB characters in the clipboard text. If disabled, TAB characters will be converted to ASCII SPACE characters.
Cursor	Text Cursor	Blinking Cursor	Set Cursor to Blink
		Cursor Type	Block (choice)
			Underline (choice)
		Cursor Behavior	Invert Text Color (choice)
			Fixed Color (choice)
		Cursor Color	Pick a cursor color.
	Rule Lines	Display Rule Lines	Enable rule lines.
		Horizontal	Display horizontal lines.
		Vertical	Display vertical lines.
		Short Lines	Use short lines.
		Rule Line Color	Pick a line color.

Table 12-17: Settings Options (Sheet 3 of 3)

Menu	Item	Definition
Display	Show ClickPad	Display ClickPad if enabled.
	Show HotSpots	Display Hotspots if enabled.
	Show ToolBar	Display ToolBar if enabled.
	Display Font Family	Show current font family.
	Enable 3270 ScrollBack	Allow scrolling of 3270 screen history. Set number of 3270 screens to keep in history.
	Enable 5250 ScrollBack	Allow scrolling of 5250 screen history. Set number of 5250 screens to keep in history.
	Enable VT ScrollBack	Allow scrolling of 3270 screen history. Set number of VT lines to keep in history.
	Browse Fonts	Browse available fonts.
	Look and Feel	Toggle between Java and Platform. Java (default) emulation windows use SUN Java UI components. Platform emulation windows attempt to reflect system feel, Windows feel for Windows and Mac feel for Apple, etc.
EHLLAPI	Enable EHLLAPI	Check to enable EHLLAPI
Keyboard	TypeAhead	See ”Cursor Options” on page 172.
	Lock Backspace to Field	Prevent backspace out of current field.
	Destructive Backspace	Erase when backspacing.
	Word Wrap (3270 only)	Disabled by default. When typing in a text field, unprotected field, and cursor is at the last location on the field, the entire word is moved to the next field preventing word splits. A word is defined as 2 or more contiguous characters separated by spaces.
Mouse	Move cursor with Ctrl+Left Button (3270/5250 only)	See ”Move Cursor with Mouse (Light Pen)” on page 174.
	Select Word with Left Button Double-click (3270/5250 only)	Double clicking a location on the display moves the cursor to that location and selects the entire contents of the field. On the first click of the double click, the cursor to mouse action will be performed if enabled. In any case, the cursor will be moved on the second click as part of the *select field* behavior.

Cursor Options

The cursor can be customized in several ways:

- Enable **Blinking Cursor** to cause the cursor to blink. Disabling causes a non-blinking cursor to display.
- *Block* **Cursor Type** displays a solid cursor; *Underscore* changes the cursor to a single line.
- *Invert Text Color* under **Cursor Behavior** displays the cursor and any text the cursor may be on in different colors allowing for easier readability. *Fixed Color* behavior will display the cursor color selected regardless of text color.
- The **Cursor Color** is also configurable.

A *cross-hair cursor* makes it easier for you to view full lines of data (vertical or horizontal rule, or both) on any emulation screen. To select this function, complete the following steps.

1. To activate the cursor options, select **Preferences>Settings>Cursor** from the menu. This option is only available to you if your System Administrator has given you permission for this setting in your session profile.

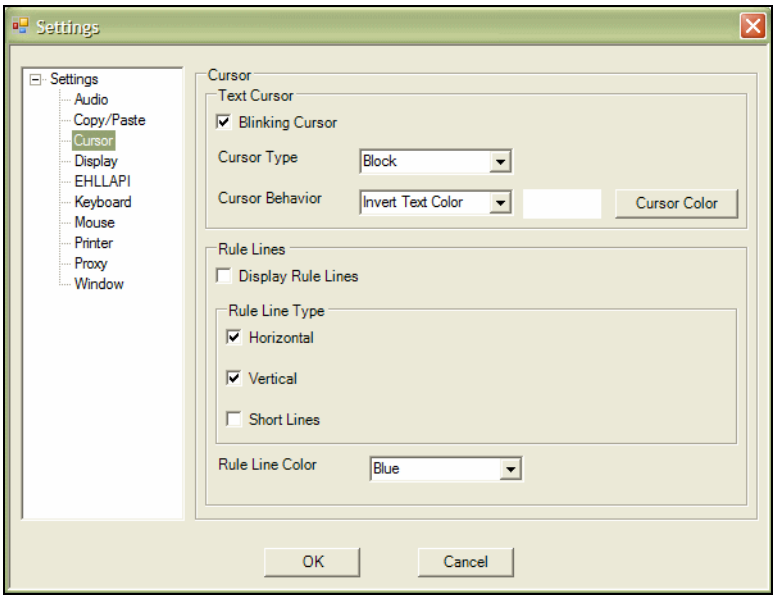


Figure 12-96: Settings Cursor Menu

2. You will find many options with this feature as described below:
   - Rule Lines: select rule lines off/on.
   - Horizontal Rule: select to view the horizontal rule.
   - Vertical Rule: select to view the vertical rule.
   - Short Rules: select to view the short rule or deselect to view the long rule across the entire screen.

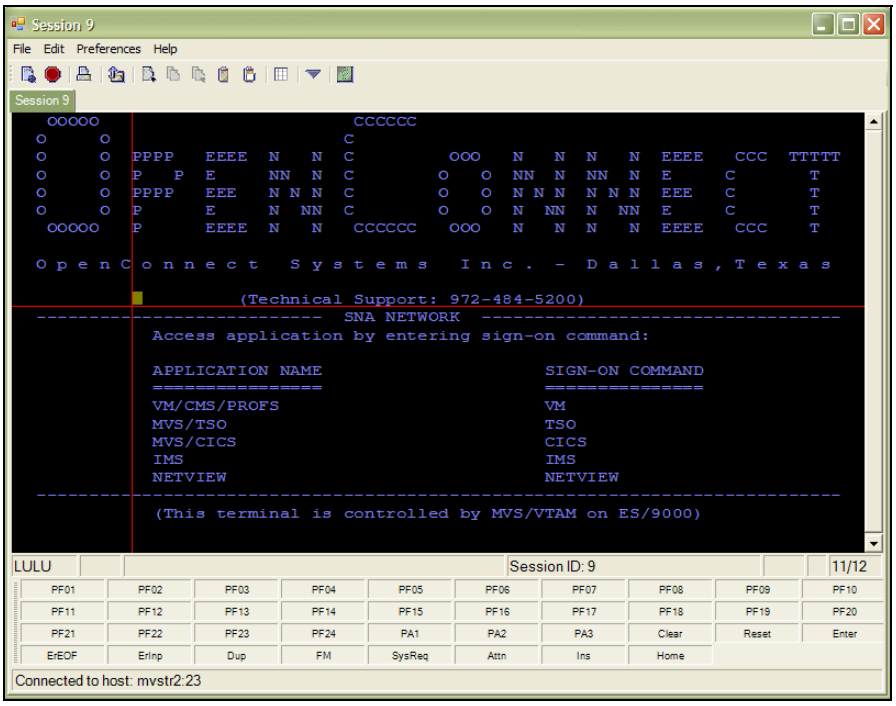


Figure 12-97: Cross-hair Cursor

3. Select a color for the rule line using the drop-down menu.

Type-ahead

In a normal 3270 or 5250 sessions, the keyboard locks after you press Enter or another AID key, and it will remain locked until the next buffer of information is received from the host. Enabling this option allows the next string of host information to enter a buffer without waiting for the next host screen. When the next host screen returns, WebConnect sends the saved buffer of information to the host.

1. To enable **Type-ahead**, select the number of buffers to use from the **Type-ahead** submenu (Type-ahead is enabled by default).

2. To disable **Type-ahead,** select Disable from the **Type-ahead** submenu.

Move Cursor with Mouse (Light Pen)

The Light Pen feature is designed to perform on-screen actions with or without using the keyboard. You can use it either of two ways.

1. Use **Ctrl + Left Mouse Button** (default).

   Or you can activate the cursor to mouse operation from the **Preferences>Settings>Mouse** Menu.

2. Enable the **Setting>Mouse>Move cursor with Ctrl+Left Button (3270/5250 only)** feature and click the right mouse button for the global Light Pen functionality, as follows.
   - Click the right mouse button and position the cursor in a light pen field to invoke the light pen functionality.
   - Click and drag the cursor within a field to invoke the default block/highlighted functionality.

13 .NET Client WC Key Map, Macro, and VB Script Editor

The WebConnect Key Map/Macro Editor provides a way to create key commands and WebConnect Macro for 3270, 5250, or VT sessions.

Key Commands on page 178.

- Create a keyboard command by assigning a key or key sequence to a key combination.
- Allows users to access custom macros or key commands that were created by an administrator.

WebConnect Macros on page 181.

- Create a user, including basic program controls such as *goto*, *input variables*, *prompts*, *wait statements*, and other variables.
- Import or edit pre-defined, third-party macros such as *"Rumba *.rmc"* macros.

VB Scripts on page 189.

- Create and edit user VB Scripts.
- Import and edit pre-defined, third-party macros such as *Attachmate EXTRA! *.ebm"* macros.
- Ehllapi must be enabled for this feature to appear. See ”3270, 5250, and VT Client Emulation Features” on page 50.

User Key Map Configuration Window

To use the WebConnect Macro Editor complete the following steps:

1. Select a session (3270, 5250, or VT) from the SESSION panel, shown in Figure 13-98, by clicking on it.

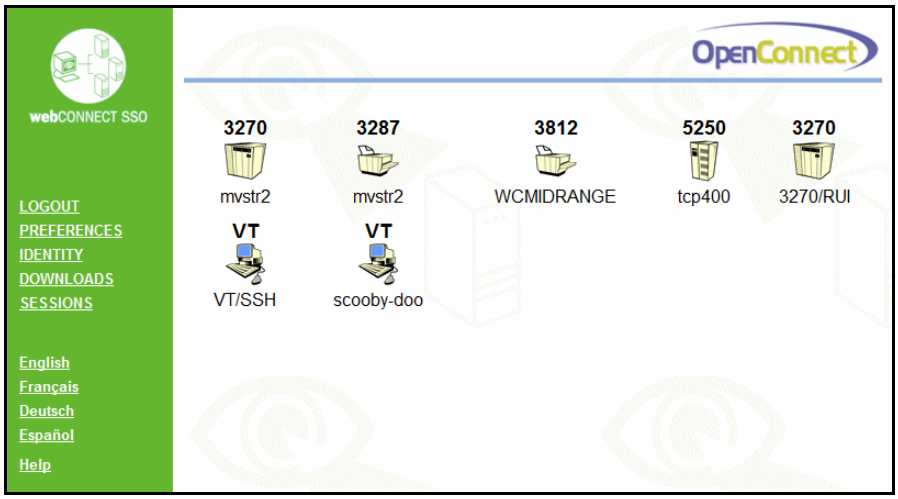


Figure 13-98: SESSION panel

2. The session opens in a separate window as shown in Figure 13-99.

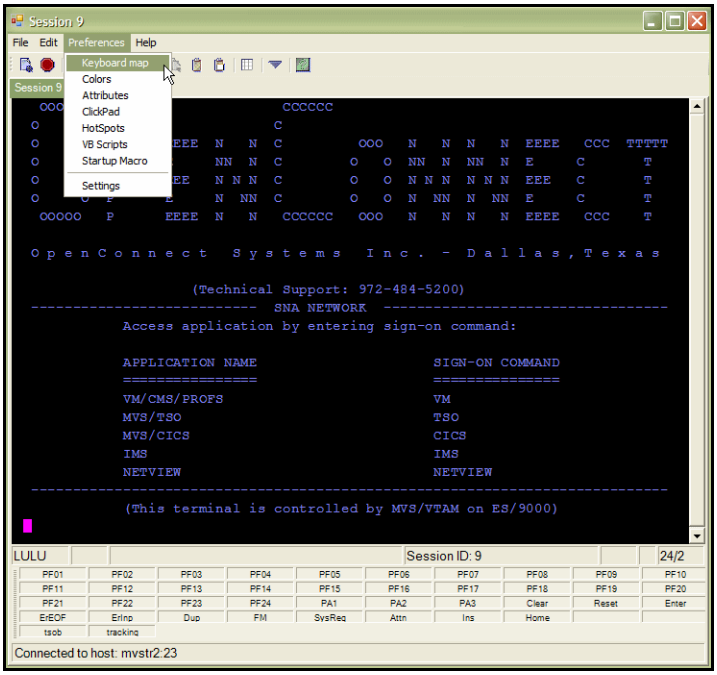


Figure 13-99: Key Map Menu

3. Select **Preferences>Keyboard Maps**.

   The User Key Map Configuration window displays showing a Keys tab by default, as well as a WebConnect Macros tab.

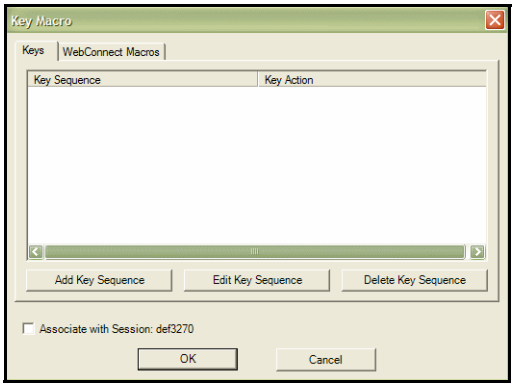


Figure 13-100: Key Map/Macro Configuration

4. Select the tab for the one you intend to create or edit for this session. See ”Key Commands” on page 178, or ”WebConnect Macros” on page 181.

Key Commands

Creating a New Key Command

1. Select the **Keys** tab (default tab).
2. Click **Add Key Sequence**.

   A dialog box appears as shown in Figure 13-101, on page 178.

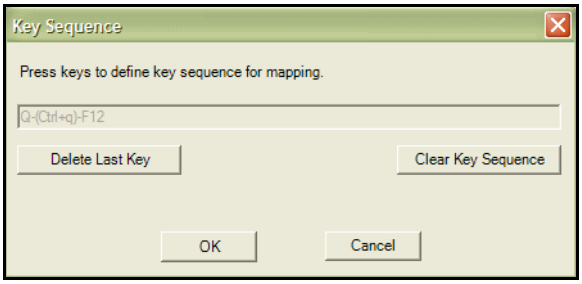


Figure 13-101: Create Key Sequence

3. On the keyboard, enter the key or key sequence command you want to map. The selected keys automatically display in the shaded **Key Sequence** box.
4. When you have completed the key commands, click **OK**.

   The Key Sequence editor appears as shown in Figure 13-102, on page 179.

The title bar of the panel displays the key sequence you entered.

Editing a Key Command

To edit a Key Command complete the following steps:

1. Highlight a Key Sequence and Select **Edit Key Sequence**. The panel shown in Figure 13-102 displays where commands can be mapped to the key(s) you entered.

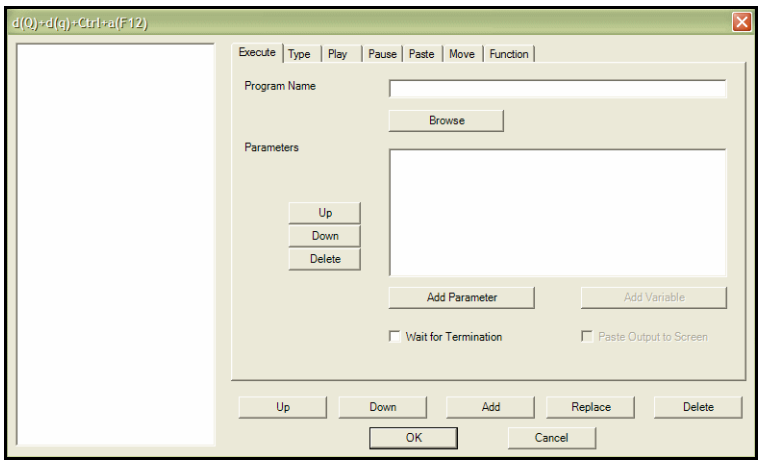


Figure 13-102: Add Key Map Commands

Note: You can add multiple commands to a key command. Table 13-18 on page 179 contains the command menu definitions.

2. Select a command from the buttons menu that you want to add to the key command.

3. Click **Add** after each change.

Table 13-18: Macro Editor Command Descriptions

Command	Description
Execute	Use to execute a program external to the applet. You can specify any command line parameter needed by the program within the function configuration.
Variable	A variable **String** (add a name and value). A variable **Screen** places screen data at row/column, and places it in the variable "name." You can specify 1) the length of screen data, 2) end of word, or 3) end of field. A variable **Prompt** to create a specified 1) title, 2) message, 3) input length.
Pause	Use to pause the system for either a time interval or for a user response. User response mode allows setting a text message but does not capture any input data.
Paste	Use to copy and then paste the contents of the configured file into the current cursor position within the emulation.
Function	Add a selected function to this command from a pull-down menu. A definition for each function displays in the shaded box. You can find all standard **AID Keys**, such as **Enter**, **Clear**, **PF1** through **PF2 4**, **PA1**, etc., under Function.

Table 13-18: Macro Editor Command Descriptions (Continued)

Command	Description
Type	Define characters and/or strings which are input as keystrokes. Also used to type the value of a selected variable or the current user ID and password values.
Play	Execute a previously defined macro from a drop-down list.
Move	Moves the cursor to the configured row/column.
Wait	Use to enter a wait statement, see ”Wait” on page 183, Table 13-19 on page 184.
Prompt	Prompt the user for input which can be assigned to a variable or sent directly to the screen at the current cursor location.
Label	Provides a marker to which the **Goto** statement can direct macro execution.
Goto	Add a **Goto** control statement to change the currently executing line of the script to **Label**.
Compare	Provides the ability to compare existing variables to each other, or to compare constant values and then select a *Goto* branch based on an *equals* comparison or a *not equal* value.
Up/Down	Use to organize the statements into desired command sequence.
Add	Adds the command selected after the current line in the macro.
Replace	Highlight a statement and replace one statement with another.
Delete	Highlight a statement and delete it from the macro.
OK	Save and exit the command configuration.
Cancel	Cancel changes to the command configuration.

4. Click **OK** when you are finished.

To play a key command use the mapped key or key sequence.

Note: The Keypad **Enter** key cannot be mapped independently of the Standard **Enter** key.

WebConnect Macros

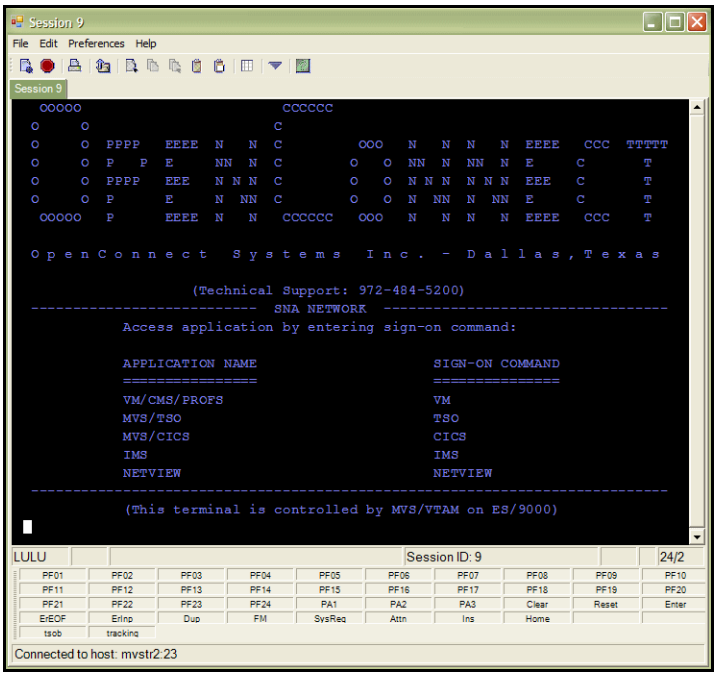


Figure 13-103: 3270 Session

Suppose, for example, you want to login to CICS from a current 3270 session. This would require the following steps.

1. Type **CICS** and press **Enter**.
2. Enter your **User ID** and **Password**.
3. Press **Enter**.

Instead, you can create a WebConnect Macro to represent the command sequence. By automating the required logon procedures, you save time by entering a key command or macro to complete the steps.

Create a WebConnect Macro

1. Select (click) a session (3270, 5250, or VT) from the SESSION panel. See Figure 13-98, on page 176.

2. From the emulation session, select **Preferences>Keyboard Map**.

   The Key Macro panel appears.

   The **Key Map Configuration** window displays a Key Commands tab (default) and a WebConnect Macro tab.

   Click the **WebConnect Macros** tab.

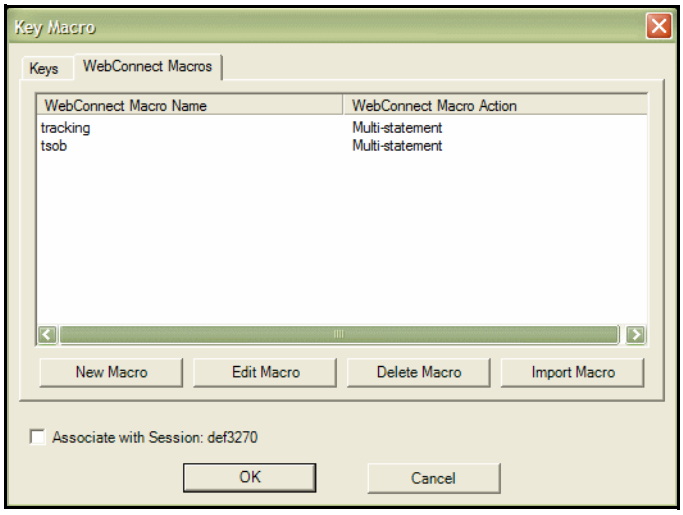


Figure 13-104: WebConnect Macros Tab

3. Click **New Macro** from the **WebConnect Macro** tab from any session type.

   The New Macro Name dialog box appears.

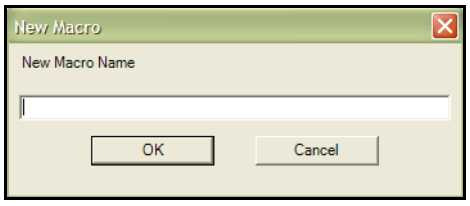


Figure 13-105: Name New Macro

4. Enter a new macro **Name** and click **OK**.

The Macro Definition panel appears with the macro name.

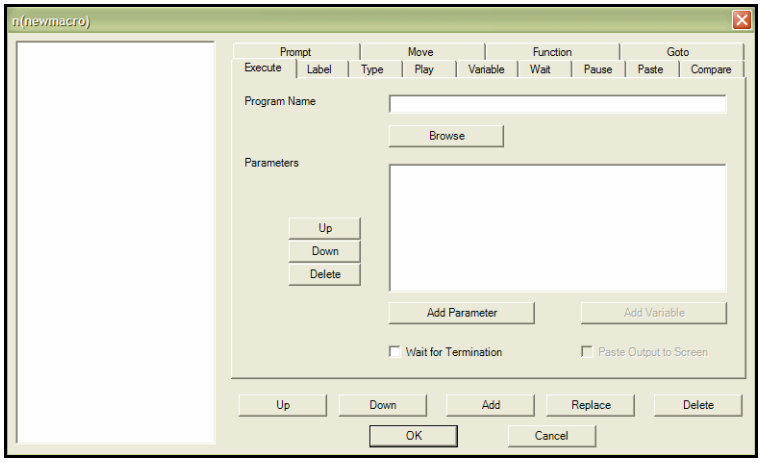


Figure 13-106: Define Macro Action

5. Select tabs and commands to add to the WebConnect Macro.

Note: You can add multiple commands to a key command or WebConnect Macro. For command menu definitions see Table 13-18 on page 179.

6. Click **Add** after each change to the macro configuration.

7. Click **OK** when you are finished.

8. To play the macro, select **Play Macro** from the **File>Macro** emulation session **Menu**.

Wait

Wait provides several formats that allow executing WebConnect Macros to wait on synchronized states or specific text messages. The following section discusses those formats.

Cursor

Allows you to pause macro execution until the emulation cursor is at the defined row/column location. The default time-out value of zero (0) waits for an unlimited time.

By default, the wait starts immediately upon executing the line in the script. If the **After next AID key** box is checked the operation does not take effect until after the next AID key has been processed by the emulation.

Wait Text

The Wait Text statement operates in one of two ways determined by the **After next AID key** check box. Having the **After next AID key** checked (enabled) provides backward compatibility with older wait text macros or named maps.

In either case the only *required* parameter is *text* in the **Wait For Text** dialog box. See ”After next AID key Disabled (Default)” on page 184 and ”Editing macros built prior to WebConnect 6.3” on page 185 for details about the two modes of operation.

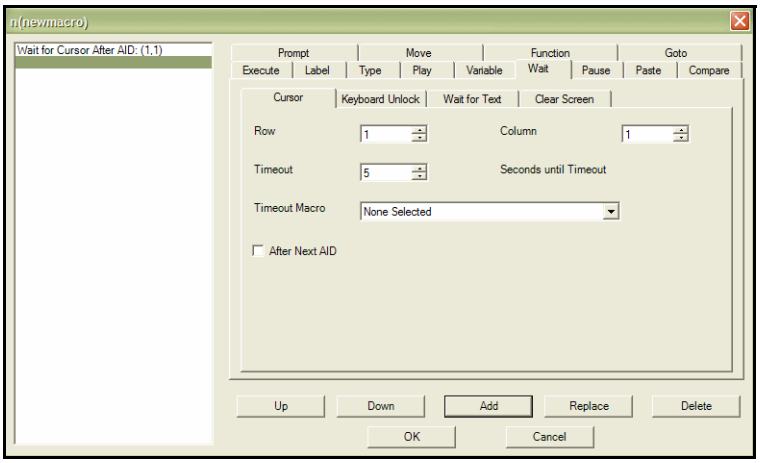


Figure 13-107: Wait Tab

After next AID key Disabled (Default)

Executes the macro until the time-out value (optional) has elapsed or text is matched on current host screen.

Table 13-19: Wait Options—After next AID key Disabled (Sheet 1 of 2)

Option	Availability	Description
Wait For Text:	**Required**	Alphanumeric string
Ignore Case:	**Unavailable**	
At Row/Column:	**Optional**	Enable row and column designation in Row and Column below
Until End Of Screen:	**Unavailable**	

Table 13-19: Wait Options—After next AID key Disabled (Sheet 2 of 2)

Option	Availability	Description
Row:	**Available if At Row/Column is checked.**	Available if At Row/Column is checked. Specify exact row where text string is to begin.
Column:	**Available if At Row/Column is checked.**	Available if At Row/Column is checked. Specify exact column where text string is to begin.
Second(s) Until Timeout	**Optional**	Time in seconds until the wait is stopped
Timeout Macro:	**Optional**	The timeout condition can be used to trigger a Timeout Macro. Invoking the Timeout macro effectively ends the current macro.
After next AID Key:	**UNCHECKED**	Disabled (default)
Proceed Goto:	**Unavailable**	
Timeout Goto:	**Unavailable**	

Editing macros built prior to WebConnect 6.3

After next AID key Enabled

Executes the macro *when* text matches that in the **Wait For Text** dialog box on *any* of the emulation screens *as they occur* until the time-out value has elapse if set.

Allows the macro to continue processing subsequent macro statements. AID (Attention Identifier) Keys from the macro may navigate to new host screens.

If you do not set either label, the macro execution resumes on the next macro statement after matching text or a time-out has expired.

Table 13-20 describes the options available with After next AID key enabled.

Table 13-20: Wait Options—After next AID key Enabled (Sheet 1 of 2)

Options	Availability	Descriptions
Wait For Text:	**Required**	Alphanumeric string
Ignore Case:	**Optional**	Ignore case in Wait For Text
At Row/Column:	**Optional**	Enable row and column designation in Row and Column below.
Until End Of Screen:	**Conditional**	Available if At Row/Column is enabled
Row:	**Conditional**	Available if At Row/Column is checked. Specify exact row where text string is to begin.

Table 13-20: Wait Options—After next AID key Enabled (Sheet 2 of 2)

Options	Availability	Descriptions
Column:	Conditional	Available if At Row/Column is checked. Specify exact column where text string is to begin.
Second(s) Until Timeout	Optional	Time in seconds until the wait is stopped
Timeout Macro:	Unavailable	
After next AID Key:	CHECKED	Enabled
Proceed Goto:	Optional	If the wait text cannot be found, Goto statement label.
Timeout Goto:	Optional	If the macro times-out before the text is found, Goto statement label.

Keyboard Unlock

The macro execution pauses until the keyboard unlock command is received. You can configure the wait to only apply after the emulation parses the next AID key. This command is mainly used for synchronization purposes.

Clear Screen

The macro execution pauses until the clear screen command is received. You can configure the wait to only apply after the emulation parses the next AID key. This command is mainly used for synchronization purposes.

Import WebConnect Macro

You can import a macro from any of the type session selected (3270, 5250, or VT).

1. Select the **WebConnect Macros** tab from any session macro editor.

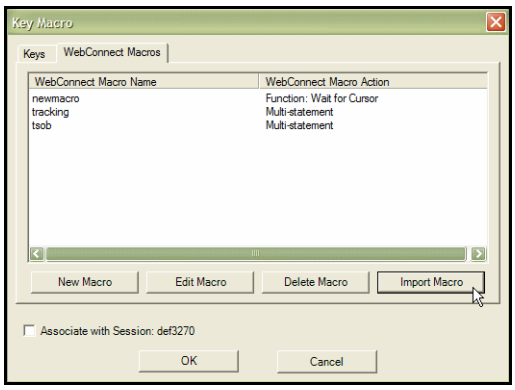


Figure 13-108: Import Macro

2. Select **Import Macro** from the **WebConnect Macro** tab.

   The File Browser window appears.

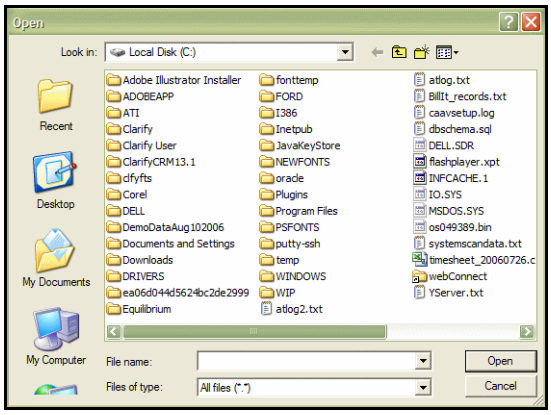


Figure 13-109: Import Macro

3. Select a macro file and click **Select Macro File** on the browser dialog.

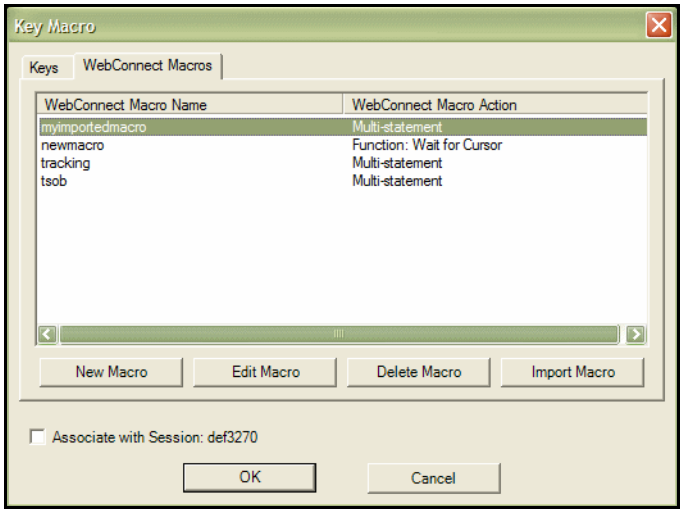


Figure 13-110: Imported Macro

The imported macro name displays in the “Key Macro Configuration.”

4. You can use or edit the macro as you normally would. See Table 13-18 on page 179, and ”Click New Macro from the WebConnect Macro tab from any session type.” on page 182“ for macro editor definitions.

Note: Unsupported macro commands are converted to **Pause** commands with the message field indicating the unsupported command. The following Rumba macro commands are currently unsupported:

- Connect
- Disconnect run Application File Transfer receive
- File Transfer Send
- Compare values-except Goto (Label), which is supported
- Copy From
- Paste To

5. Click **OK** when you are finished.

6. To play the macro, select **Play Macro** from the **File>Macro** emulation session Menu.

VB Scripts

All VB Scripts must be saved to the desktops where they are required to run, otherwise the scripts do not run. Alternatively, the administrator may create a shared drive common to all desktops and configure session parameters to run the VB Script from the central location.

1. Click **Preferences>VB Scripts** from a 3270 or 5250 session. See Figure 13-111, on page 189.

   Click **New**.

2. The **VB Script Configuration** window displays.

Note: If the VB Scripts is not available you may not have EHLLAPI *enabled* from the applet. From a client emulation applet ensure that **Preferences>Settings>EHLLAPI** is set.

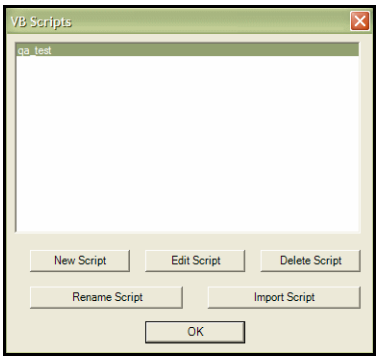


Figure 13-111: VB Scripts

Creating a New VB Script

To create a new VB Script complete the following steps:

1. Click **New Script**. The script name dialog box appears as shown in Figure 13-112.

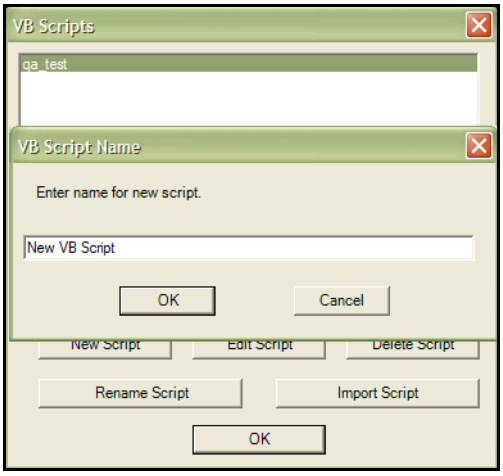


Figure 13-112: New VB Script Name

2. Enter a new **VB Script Name** and click **OK**. The new VB Script name now appears in the script list as shown in Figure 13-113, on page 190.

Note: All VB Scripts must be manually copied to a shared drive common to the target desktops, otherwise the scripts do not run.

To edit the VB Script see ”Editing a VB Script” on page 191.

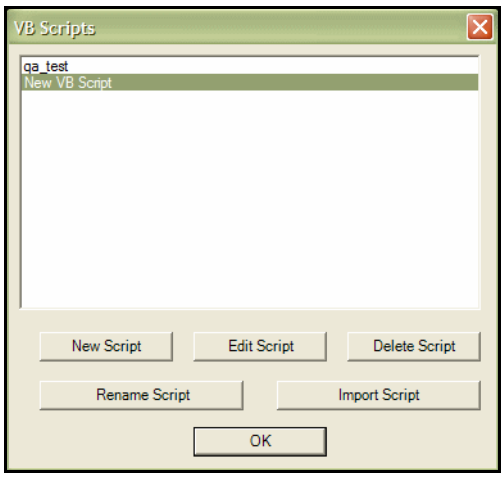


Figure 13-113: New VB Script

Import VB Script

You can import an Extra VB Script into the WebConnect VB Script Editor from any 3270 or 5250 session types you select.

1. Open the **VB Script** editor from any session macro editor. See Figure 13-111.
2. Click **Import VB Script**.
3. A File Browser window opens the **Select VB Script to Import** dialog box where you can select an existing VB Script file.
4. Select an Extra BASIC macro file (*.EBM) and click **Open**.

   The selected macro file is converted to the WebConnect VB Script file format and the file name appears in the script list as shown in Figure 13-113.
5. You can use or edit the script as you normally would.

Editing a VB Script

To edit a VB Script complete the following steps:

1. Highlight a VB Script and click **Edit Script**.
2. The WebConnect Script Editor appears in a separate window as shown in Figure 13-114 below. See the *WebConnect Script Editor User Guide* and the *WebConnect Script Language Reference Guide for more information about editing VB Scripts.*

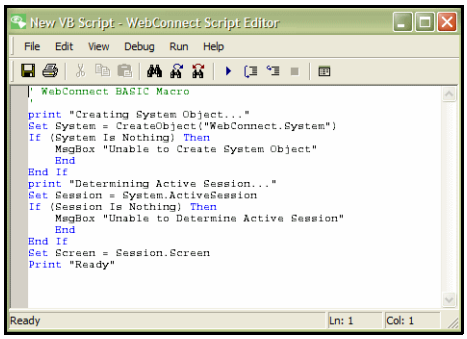


Figure 13-114: WebConnect Script Editor

Remove a VB Script

To remove a VB Script complete the following steps:

1. Select the script you want to remove from the list in the Key Map Configuration window. See Figure 13-113, on page 190.
2. Click **Delete Script**.
3. Click **OK**.

User Macro Autostart

The User Macro Autostart feature enables users to assign *User Defined Startup Macros* to specific session numbers and save them in their user preference settings. This feature requires no administrator intervention, providing users direct control over their startup macro configuration.

When using the User Macro Autostart feature keep in mind the following:

- Every session type (3270, 5250, VT) uses the same session number list.
- Session level startup macros take precedence over user autostart macros and start first.
- Macro operation is exactly the same as if it were invoked through **File>Macro>Play Macro** menu option.

There are three modes of operation:

1. **Default Macro set only**—Each time the particular session icon is clicked the default macro is run. No session number association is required.

2. **Default Macro set to *None* with macros assigned in the Startup Macro List**—The first time the session icon is clicked the macro assigned to Session Number 1 runs. The second time the session icon is clicked, the macro assigned to Session Number 2 runs and so on.

3. **Default Macro set and macros assigned in the Startup Macro List**—The first time the session icon is clicked the macro assigned to Session Number 1 runs. The second time the session icon is clicked, the macro assigned to Session Number 2 runs and so forth. Subsequent unassigned sessions run the default macro.

Note: When a session is terminated, the Session Number assigned to it on the **Startup Macro List** is left open. The next time that session type's icon is clicked, the first open Session Number is assigned to the new session and the corresponding macro assigned to that Session Number is started.

For example: A user assigns startup macros to four Session Numbers and starts those sessions. Later, the session assigned to Session Number 3 is lost for whatever reason. When the user clicks that session icon again, the resulting session is assigned to the open Session Number 3. If the user clicks the session icon once more, making a total of five sessions, the fifth session starts according to the Default Macro setting since a fifth session had not been assigned to a macro on the Startup Macro List.

Assigning Autostart Macros

To setup Macro Autostart complete the following steps:

1. Click **Preference>Startup macro**. See Figure 13-116, on page 194.

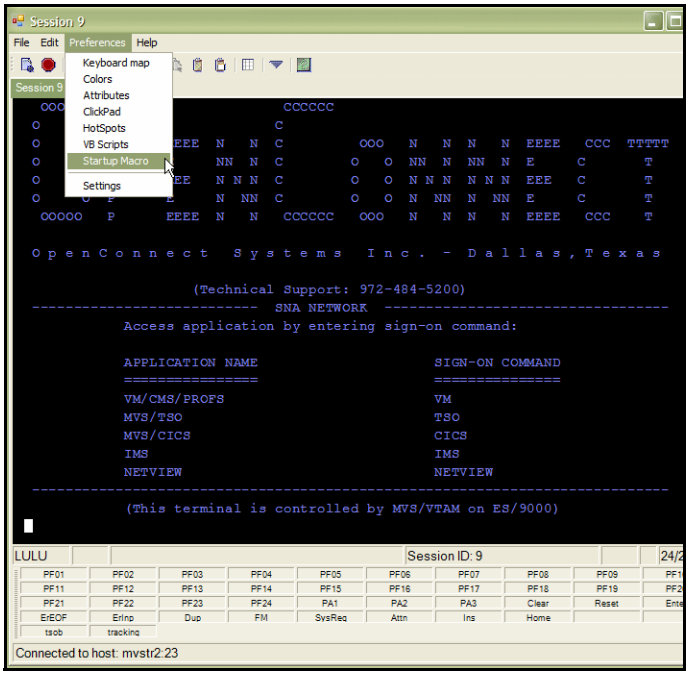


Figure 13-115: User Autostart Macros

The **Startup Macros** panel appears as shown in Figure 13-116, on page 194.

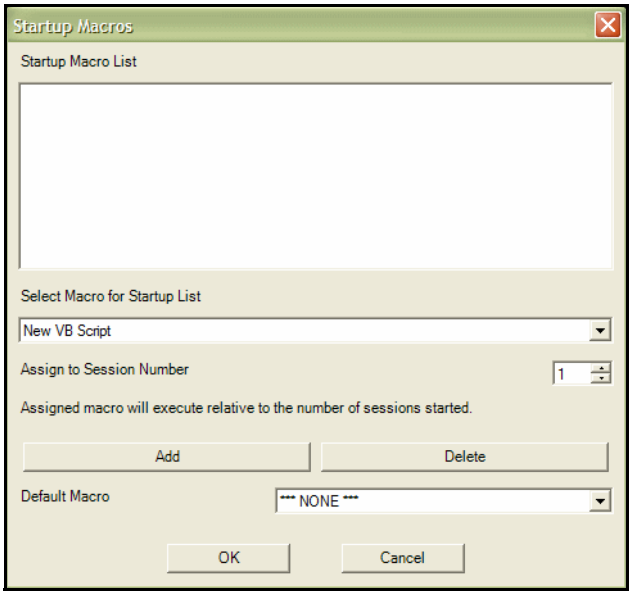


Figure 13-116: User Macro Autostart

Default Macro

2. Select a macro from the **Select OK Macro** list as the default startup macro for the current session type or leave it set to the default, **None**.

> **Note:** Only keystroke macros for the *current* Session type are available along with Complex Macros. VB Scripts are available for 3270 and 5250 sessions.

Startup Macro List

3. Enter the subsequent session number (1-99), if any, you want to assign a startup macro to in the **Assign To Session Number** field.

4. Select a macro from the pull-down **Select Macro For Startup List** and click **Add**.

   The selected macro appears in the **Startup Macro List**.

5. Repeat Steps 3 and 4 for additional sessions making sure to enter unique session numbers in the **Assign To Session Number** field for each macro.

6. Click **OK**.

Unassigning Startup Macros

To unassign and disassociate a macro from a session complete the following steps:

1. Click **Preference>Startup macro**.

   The **Startup Macros** panel appears as shown in Figure 13-116, on page 194.

2. Select **None** from the **Select Default Macro** list. Click **OK**.

3. Select the macro in the **Startup Macro List** that you wish to unassign, if any and click **Delete**.

4. Click **OK**.

14 Swing Client Sessions

The Java Swing Client requires Java 5 or higher.

The **SESSION panel**, shown in Figure 14-117, is the initial user window displayed by WebConnect and provides access to pre-configured sessions, user-configurable preferences, settings, and other components that have been implemented by your System Administrator.

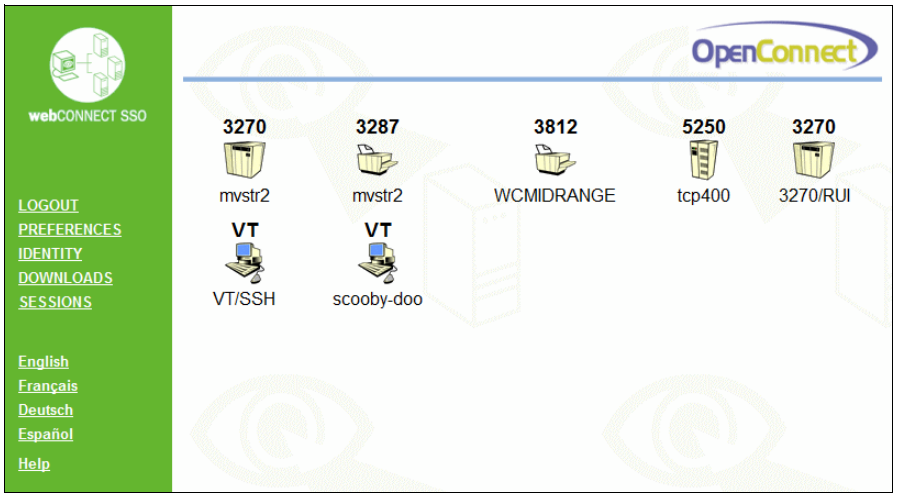


Figure 14-117: SESSION Panel

3270, 5250, and VT Client Emulation Features

The 3270, 5250, and VT Swing client emulations have similar user interfaces and share many interface features. The client window has a Menu Bar, an Emulator Screen Toolbar, a Tab bar, an Emulation Space, and an optional undockable ClickPad as shown in Figure 14-118 below.

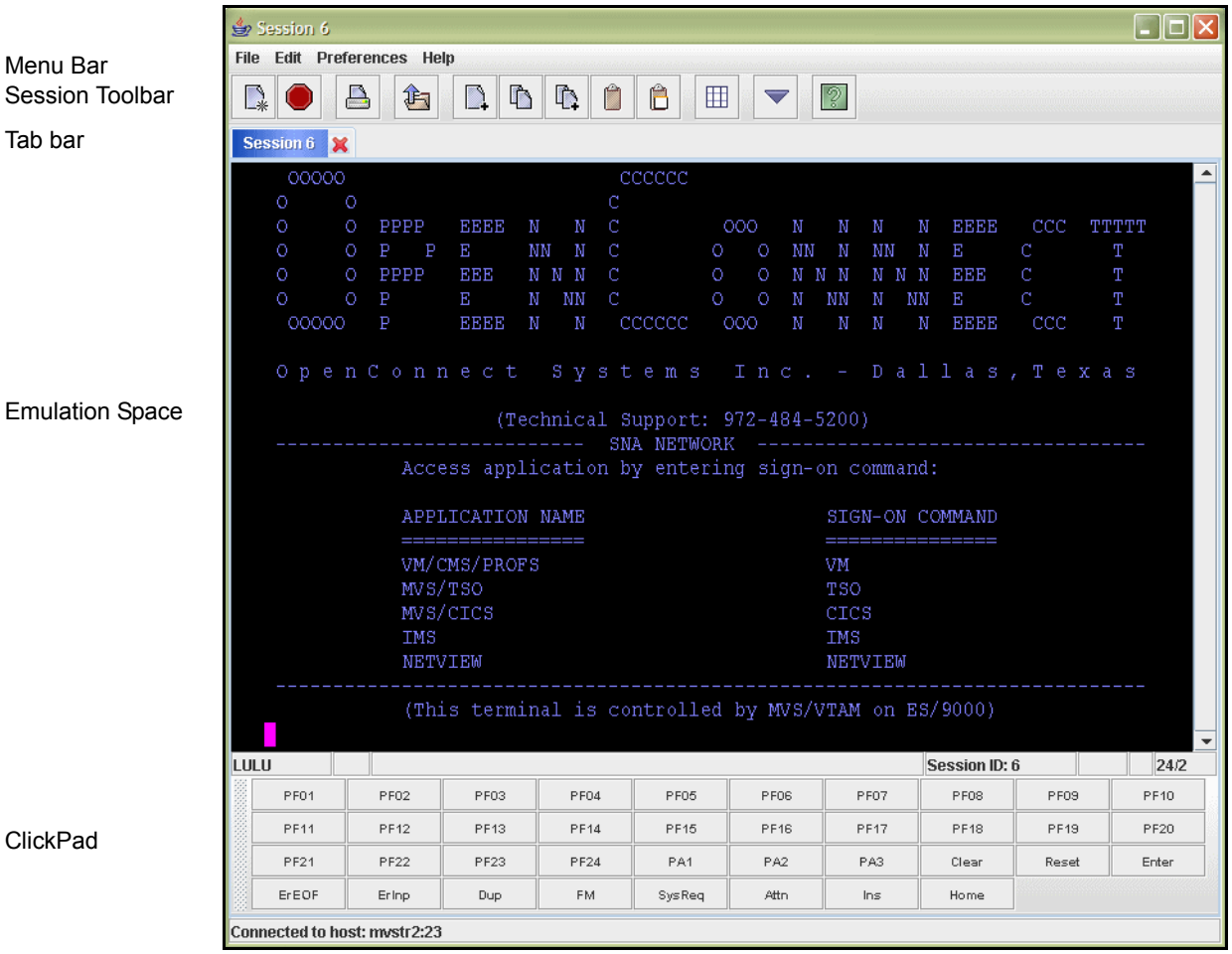


Figure 14-118: Swing Client Window

Menu Bar

Your administrator can enable different menu options for your user ID; therefore, all of the following functions may not be visible (3270, 5250 and VT) on your Menu Bar.

Table 14-21: Session Menu Options (Sheet 1 of 2)

Menu	Item	Definition	
File	New Session	Opens a new session.	
	Print Screen	Prints the current screen.	
	Start Associated Print	Starts a print session if one is associated with this session.	
	Save History to File	Allows screen history to be saved to a file.	
	Macro	Play Macro	Play a pre-recorded macro.
		Record Macro	Record actions for macro until 'End Recording' is clicked.
		End Recording	Stop recording and save previous actions into a macro.
		Cancel Macro	Stop recording and discard recorded actions.
	Save Settings	Saves the user's settings.	
	File Transfer	Transfers files between a Java client and an SNA host.	
	File Transfer Lists	Create and use lists of file transfers.	
	Session List	Lists all open sessions. Allows termination of sessions.	
	Exit	Closes the emulation window and exits the session.	

Table 14-21: Session Menu Options (Sheet 2 of 2)

Menu	Item	Definition
Edit	Cut	Place selected text in clipboard. Replace unprotected portions of selected text with spaces. Not applicable for VT.
	Copy	Copies highlighted text from the screen to the clipboard.
	Copy and Append	Copies and appends (adds) data to the clipboard without destroying existing clipboard data.
	Paste	Paste the copied text from the clipboard to the highlighted area of the window.
	Continue Paste	When cursor reaches the last valid paste location the remainder of the clipboard data is saved and the menu option Continue Paste is enabled. When selected paste data comes from the *saved* buffer and not from the clipboard. It is disabled after all saved data has been pasted.
	Select All	Selects the entire screen to be copied and pasted.
Preferences	Keyboard Maps	Edit the Keyboard Maps for this session.
	Colors	Specify Colors.
	Attributes	Edit the Attributes for this session.
	ClickPad	Turns ClickPad (PF Keys) at the bottom of the screen on and off.
	Hotspots	Edit Hot Spots.
	VB Scripts	Edit the VB Script Configuration window.
	Startup Macro	Edit Startup Macros.
	Settings	Edit Audio, Copy/Paste, Cursor, Display, EHLLAPI, Keyboard, Mouse, Printer, Proxy, and Window Settings. See ”The Settings Menu” on page 250 for details.
Help	About Keys	Displays a function key map.
	Trace Keys	Displays diagnostic information for EHLLAPI and keyboard macros previously executed.
	About Session	Displays Client, Session, and EHLLAPI details This information can be saved, printed, or copied to the clipboard from this dialog.

Session Toolbar Menu

The Sessions Toolbar menu must be enabled by your administrator. You can toggle it ON/OFF under the **Preferences>Settings>Display** menu on the client window menu bar.

Table 14-22: Emulation Icon Values (Sheet 1 of 2)

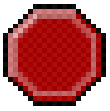
Icon	Definition
	New Session—Opens a new session emulation screen.
	**Disconnect Session**—Exits the present session without saving information.
	Print Screen—Sends the emulator screen to a print session.
	File Transfer—Transfers files between a Java client and an SNA host application using standard IND$FILE transfer protocol.
	Select All—Highlights the entire screen.
	Copy—Copies highlighted areas of the screen to the clipboard.

Table 14-22: Emulation Icon Values (Sheet 2 of 2)

	Copy and Append—Used to copy and append (add) data to the clipboard without destroying the existing data that is already on the clipboard. *Use the Left mouse button to identify (highlight) text you want to copy.*
	Paste—Copies data from the clipboard to the highlighted area on the screen.
	Block Paste—Copies data from the clipboard to the highlighted area on the screen using Block mode.
	ClickPad—Turns the ClickPad (PF Keys) at the bottom of the screen on and off.
	Play Recorded Macro—Displays a list of previously recorded macros and allows you to select one to play.
	About Session—Displays detailed information about the client machine, browser, and version of WebConnect Client. This information can be saved, printed, or copied to the clipboard from this dialog.

Tab Bar

The Tab Bar displays a tab for each open session. Clicking on a tab displays the corresponding session in the emulation space.

Emulation Space

The Emulation Space, located below the Menu and Tool bars, displays detailed messages of the WebConnect server and the host connections. If encryption is used, messages regarding encryption key generation also displays in the emulation space. After a host connect is established, host data displays in the emulation space according to host data attributes, unless the Hot Spots option is active. See ”Configuring Hot Spots” on page 248.

ClickPad

The ClickPad displays below the Emulation Space if enabled by the administrator as shown in Figure 14-118, on page 198.

The ClickPad has a handle on the left hand side that can be used to click and drag the clickpad out of the emulation window.

Click **Preferences>ClickPad** to access the ClickPad Configuration window.

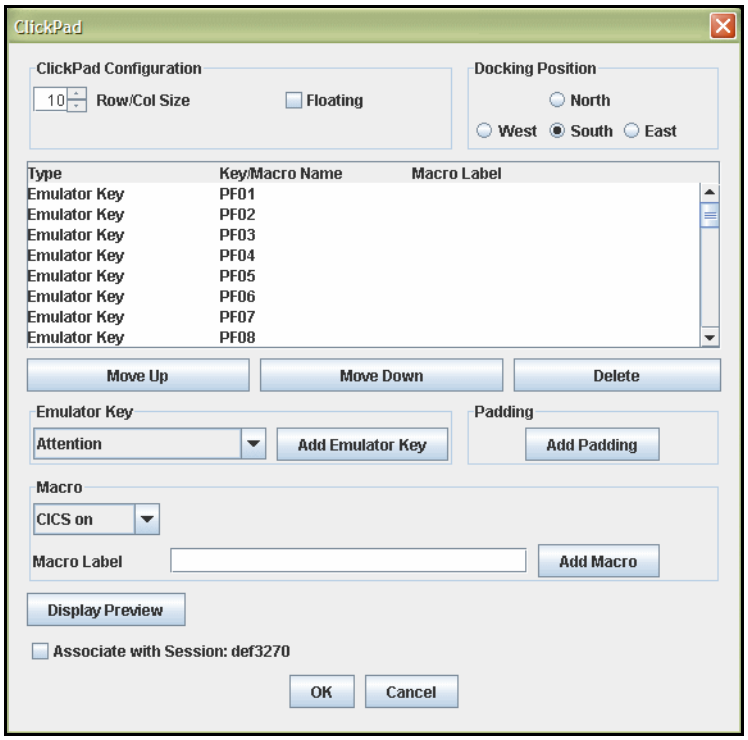


Figure 14-119: ClickPad Configuration

Copy and Paste Features

The copy/paste feature can be set for either *block* (copy/paste selected columns) or *stream* (copy/paste rows) mode by setting the Block Paste option under the Setting menu. By default, this setting is block mode enabled. If disabled, the data is copied in stream mode.

Copy

To copy text to the clipboard, complete the following steps:

1. Mark the text by using one of the following copy methods:
   - **Select All** from the Edit menu: Selects the current screen and the entire contents of the scroll buffers.
   - Highlighting text using a mouse: Click and hold the left mouse button at the beginning of the text you want to copy. Drag the cursor to highlight the entire text you want to copy.
   - Highlighting text using the keyboard: Position the cursor at the beginning of text you want to mark and then use the key sequences in Table 14-23.
   - Double left mouse to select entire field.
2. Select **Copy** from the **Edit** menu or toolbar. The text is copied to the clipboard.

   You can use certain keys to highlight text on the screen, as defined in the following table.

Table 14-23: Keyboard Mapping

Key Sequence	Mapping
Shift + Left	Highlight the text to the left of the current select location.
Shift + Right	Highlight the text to the right of the current select location.
Shift + Up	Highlight the text above the current select location.
Shift + Down	Highlight the text below the current select location.
Shift + Home	Highlight the text to the beginning of the row of the current select location.
Shift + End	Highlight the text to the end of the row of the current select location.

Table 14-23: Keyboard Mapping (Continued)

Key Sequence	Mapping
Shift + Page Up	Highlight the text from the current cursor position to the first row on the screen.
Shift + Page Down	Highlight the text from the current cursor position to the last row on the screen.

These sequence functions are described below.

- Shift + Left: This marking function uses the shift key and left arrow key combination. If no text is selected, the current cursor position is selected. Otherwise, the character position to the left of the last selected character position becomes the new last character selected in the block. If the last selected character position is the beginning of a row, the last character of the previous row becomes the new last character selected.
- Shift + Right: This marking function uses the shift key and right arrow key combination. If no text is selected, the current cursor position is selected. Otherwise, the character position to the right of the last selected character position becomes the new last character selected in the block. If the last selected character position is the end of a row, the first character of the next row becomes the new last character selected.
- Shift + Up: This marking function uses the shift key and up arrow key combination. If no text is selected, the current cursor position and all characters up to but not including the character above the current cursor position is selected. Otherwise, the character position above the last selected character position becomes the new last character selected in the block. If the last selected character position is in the first row, the first character on the screen becomes the new last character selected. If Shift + Up is followed by a Shift + Down, the new last character selected is the position that was selected prior to the Shift + Up.
- Shift + Down: This marking function uses the shift key and down arrow key combination. If no text is selected, the current cursor position and all characters up to but not including the character below the current cursor position is selected. Otherwise, the character position below the last selected character position becomes the new last character selected in the block. If the last selected character position is in the last row, the last character on the screen becomes the new last character selected. If Shift + Down is followed by a Shift + Up, the new last character selected is the position that was selected prior to the Shift + Down.
- Shift + Home: This marking function uses the shift key and home key combination. If no text is selected, the current cursor

position and all characters up to and including the first character in the row are selected. Otherwise, all characters from the last selected position to the first character in the row are selected unless it is already selected. If characters are already selected, then those characters are deselected.

- Shift + End: This marking function uses the shift key and end key combination. If no text is selected, the current cursor position and all characters up to and including the last character in the row are selected. Otherwise, all characters from the last selected position to the last character in the row are selected unless it is already selected. If characters are already selected, then those characters are deselected.
- Shift + Page Up: This marking function uses the shift key and page up key combination. When used, the current cursor position and all characters up to and including the first character on the screen are selected. Any characters that were previously selected but are not in this range are deselected.
- Shift + Page Down: This marking function uses the shift key and page down key combination. When used, the current cursor position and all characters up to and including the last character on the screen are selected. Any characters that were previously selected but are not in this range are deselected.

Paste

To paste text from the clipboard to the screen, complete the following steps:

1. Position the cursor where you want to begin copying text.
2. Select Paste from the Edit menu or toolbar.

Note: You can reposition the cursor by selecting the Cursor to Mouse option in the Setting menu. Then click the position where you want to move the cursor.

Right-Click Menu

Many copy and paste tasks along with session switching can be accomplished using the right-click menu. Table 14-24 on page 207.

Table 14-24: Right-Click Menu

Item	Definition
Copy	Copy the highlighted text to the clipboard.
Copy and Append	Copy the highlighted text and append to the contents of the clipboard.
Paste	Insert text from the clipboard at the cursor position.
Select All	Select all text on page.
Move Curser Here	Cause curser to reposition at selection.
Print Selection	Send the selected text to the printer.
Switch to Session	Change focus to session selected from the pick-list.

3287 and 3812 Client Emulation Features

The 3287 and 3812 session user interface is a tab that shows the progress of 3287 and 3812 print jobs. A few user options can affect the printed output. These options, and other interface features, are explained below.

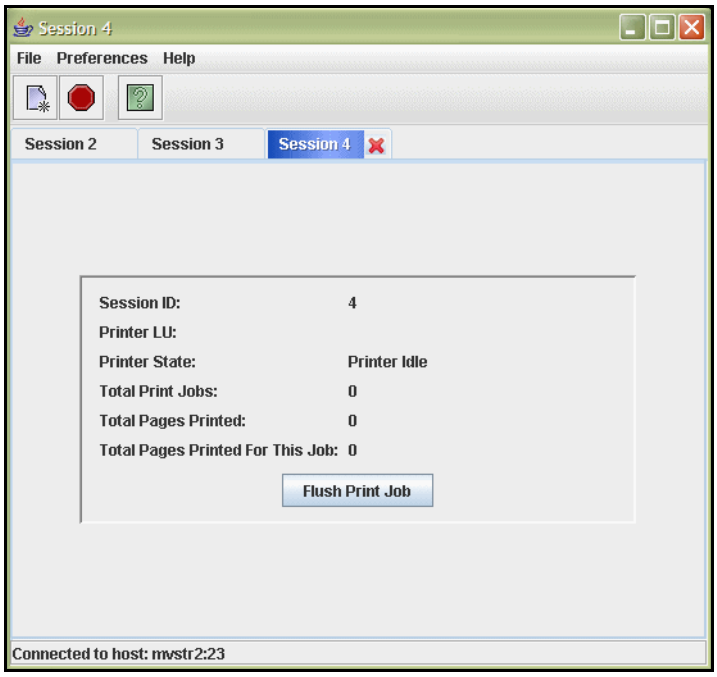


Figure 14-120: 3287 and 3812 Client Emulation

Menu Bar

The Menu Bar options are described in Table 14-25 below.

Table 14-25: 3287 Menu Functions (Sheet 1 of 2)

Menu	Item	Description
File	New Session	Opens a new 3287 session emulation tab.
	Save Setting	Saves the current user's settings.
	Session List	List all open sessions.
	Exit	Close session tab
Preferences	Settings	See Table 12-17 on page 169

Table 14-25: 3287 Menu Functions (Sheet 2 of 2)

Menu	Item	Description
Help	**About Session**	Select to view more information about the client operating system, applet version, and Java version and WebConnect Server.

Session Window

Information displayed about the print job in the session window are:

- Session ID
- Printer LU
- Printer State
- Total Print Jobs
- Total Pages Printed
- Total Pages Printed For This Job.

Recording and Playing Macros

You can record frequently used keystrokes and save them as macros to be activated and played back. Defined macros are either saved locally or to the server, depending on the Save User Files On setting option in your User Preferences. See ”Preferences” on page 30. Select one of the following functions from the emulation session **File> Macro>** menu:

- Play Macro
- Record Macro
- End Recording
- Cancel Macro

Note: In some instances, your system administrator may have set your user preferences to restrict macro recording. If this is the case your menu displays only the “Play Macro” feature. The same is true for the play macro toolbar icon.

Recording a Macro

To record a macro complete the following steps:

1. From the emulation session menu, select **File>Macro>Record Macro**.

   The New Macro Name dialog box appears as shown in Figure 14-121 below.

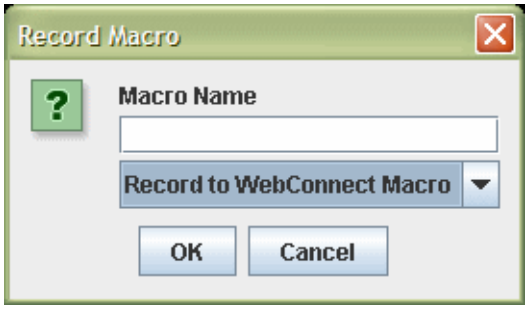


Figure 14-121: Record Macro Name

2. In the Macro Name box, type a name for the new macro (for example, **CICS Logon**).
3. Select **Record to WebConnect Macro** or **Record to VBScript** from the pulldown menu.
4. Click **OK**.
5. Type the key sequence (i.e., the commonly used keystrokes) to record the macro.

Note: Do not use the mouse or clickpad while recording. Only keystrokes can be recorded, not mouse actions. See ”Copy and Paste Features” on page 204 for instructions on using the keyboard to highlight text. For a list of the key mappings, select about keys from the emulation session Help menu.

6. When you have finished recording, click **File> Macro> End Recording**.
7. Click **OK**.

Note: You MUST continue to the following instructions and SAVE the macro or your work will be lost.

Saving a Macro File

Immediately after recording a macro you must save it.

1. Select **File>Macro>End Recording Macro**.

   The Save New Macro dialog box appears.

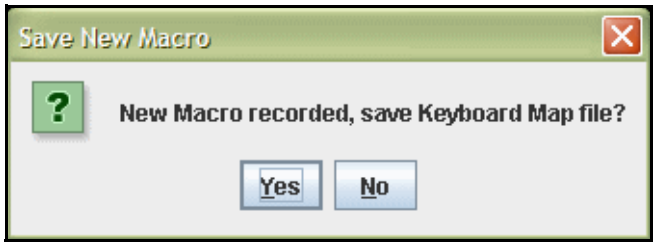


Figure 14-122: Save Recorded Macro

2. Click **Yes**.

   The macro you recorded is saved.

   The macro you recorded and saved is available to replay the next time you start a session.

Playing a Macro

1. Select **File> Macro> Play Macro**.

   The **Play Macro** window opens containing a list of available macros as shown in Figure 14-123, on page 212.

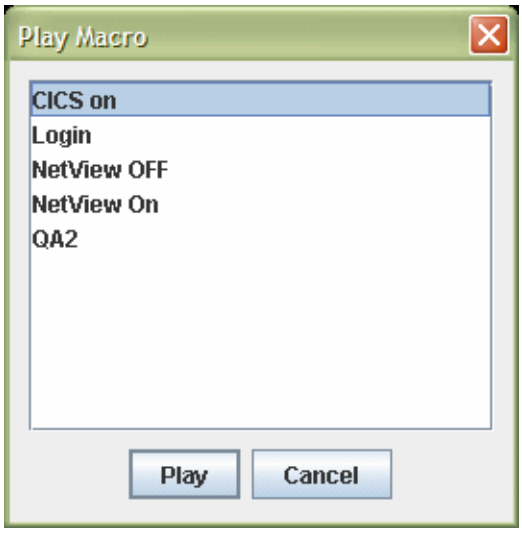


Figure 14-123: Recorded Macro List

2. Select the name of the macro that you want to play from the list.

3. Click **OK**. The macro keystrokes that you previously recorded automatically play back, activating the sequence.

Note: For 3270, 5250, and VT sessions you can also play a macro from the Toolbar menu items. See, Table 14-22 on page 201.

Stopping a Macro During Play

This option stops a macro while it is running.

1. During a macro playback if a long time-out occurs and you need to stop it, select **Macro** and **Cancel Macro.**

Deleting a Macro

1. Select **File>Preferences>Keyboard Map**. The **Key Macro** window displays.

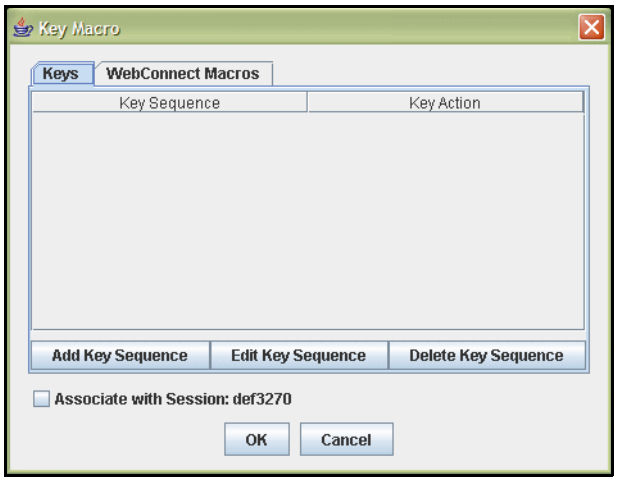


Figure 14-124: Key Macro Window

2. Click the WebConnect Macros Tab.
3. Select the macro to be deleted from the list.
4. Click **Delete Macro** to delete the macro as shown in Figure 14-125 below.

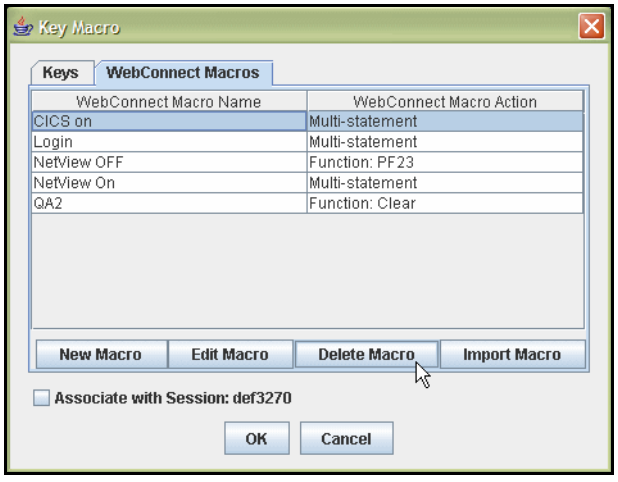


Figure 14-125: Delete Macro

5. Click **OK**.

Session List

If the WebConnect Administrator has enabled the Display Session List on Startup feature, clicking on a session type icon in the SESSION panel of the HTML user interface opens a session list window followed by the emulation session itself. Figure 14-126shows a Session List window with several sessions open.

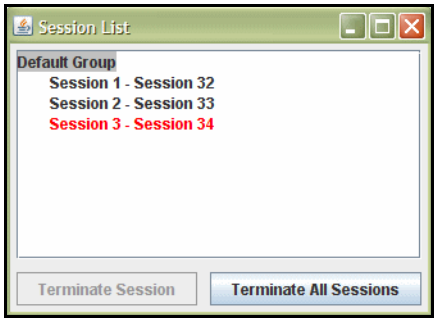


Figure 14-126: Session List

The session list provides the means to manage multiple open sessions. It displays a list of all active sessions identified by their session ID number. Your WebConnect administrator can specify custom group names. In this case, sessions will be listed by group name. Sessions that have been terminated due to network conditions or by the WebConnect Server are listed in red. Sessions can also be individually or collectively stopped by using the Terminate Session or the Terminate All Sessions buttons.

The Session List window can also be enabled by selecting **File>Session List** from the session menu.

Note: Do not use Pop-up Window Blockers as they can prevent the JRE placeholder window from starting. Disable all Pop-up Window Blockers

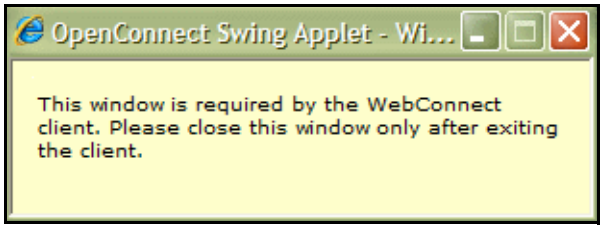

OpenConnect Swing Applet - Wi...
This window is required by the WebConnect client. Please close this window only after exiting the client.

Figure 14-127: JRE Placeholder

The JRE placeholder window is required by the WebConnect client. Close this window only after exiting the client.

15 Swing Client Printing

WebPrint allows full control over font size and style and automatically sizes a printed document based on display orientation.

OpenConnect's system fonts have been enhanced with custom font technology from Bitstream Inc.™

WebPrint must be installed locally on the client system. See "Installing WebPrint" on page 40.

Printing a Screen

You can print a single session window after you select a print screen option, see the following steps:

1. From the open session window, select **File>Print Screen** from the menu. The printer dialog window for the system displays. If the "Print to File" option has been configured it opens instead.
2. Follow the system printing procedures.

Printing Part of a Screen

To print a portion of the window text, highlight the desired area then right click and choose **Print Selection**. A printer dialog will display.

VT Session Logging

Activity during a VT session can be recorded in two different ways.

- Log Session to Printer - while enabled text displayed on the VT session is echoed to the printer.
- Log Session to File - while enabled text displayed on the VT session is echoed to the user selected file.

  Simultaneous logging to file and printer are not allowed.

When the user enables session logging, the applet sends a command to the WC server to start logging. The VT emulation in the server manages accumulation of log data and sends each line to be logged to the applet.

While logging, each printable character received is stored in a buffer in the WC server. The buffer is flushed to the applet for printing whenever the carriage return (CR) character is received from the host. Tab characters are expanded in the buffer for proper alignment of tabbed data in the printer log.

If host-initiated VT print (printer controller on) is started, the current logging buffer is flushed and logging suspended. Logging resumes when the print controller off sequence is received. Printer controller data is spooled to a separate print job by the applet to prevent mixing of printer controller data and session logging data.

The session logging feature uses the same applet print method configured for screen print and printer controller mode. This is configured in the session file or in the user's preferences.

VT Log Session to Printer

To use Session Logging complete the following steps from the session screen:

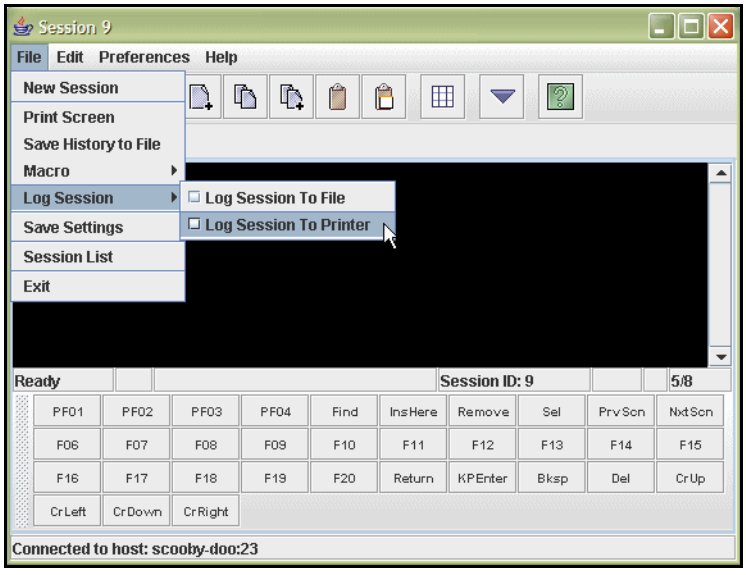


Figure 15-128: Log VT Session to Printer

1. Select **File>Log Session>Log Session to Printer**

   A print dialog box appears.

2. Check the print settings, make changes as necessary, and click **OK**.

3. Continue with your session.

   Data entered is stored in the print buffer until you are ready to print.

4. To print the accumulated session activity click **Files>Log Session>Log Session to Printer** again.

   Your session is sent to your selected printer and session logging is disabled.

VT Log Session to File

To use Session Logging complete the following steps from the session screen:

1. Select **File>Log Session>Log Session to File**

   The Specify Session Log Filename dialog box appears.

2. Enter a filename for the session log and click **OK**.

3. Continue with your session.

   Data entered is stored in the session log file.

4. To discontinue session logging click **Files>Log Session>Log Session to File** again.

3287 Print Session

Printing from any browser to a specific 3287 logical unit (LU) and gateway:

1. Select **3287 Print Session** from the *Start User Session panel*. A 3287 printer session window displays.

2. Be sure the correct gateway and LU displays in the printer session window.

3. Send a mainframe print job to the selected LU. The 3287 printer session window indicates that the session is printing.

> **Note:** To check the LU and gateway you are printing to, select About Server from the Help menu on the printer session window displayed when you start a 3287 print session. A status window will open identifying printer information, such as the number of jobs to print.
> To run print jobs unattended, disable Show Printer Dialog from the session settings menu. This is not valid for JDK printing.

Date/Time Stamp Operation

The date/time and user@host will print in the bottom margin of all pages generated by Print Screen. The user ID and PC host name will be at the left margin in the format user@host with the date/time printed at the right margin. US systems result in a date displaying as dd-mm-yy hh:mm:ss AM/PM format, 27-Sep-02 3:35.29 PM.

jdoe@ocs5555.oc.com 27-Sep-02 3:35.29 PM

Print to File Date/Time

This method does not render the page and then print it. Instead, each string is written to the file as it is received by the Print to File class.

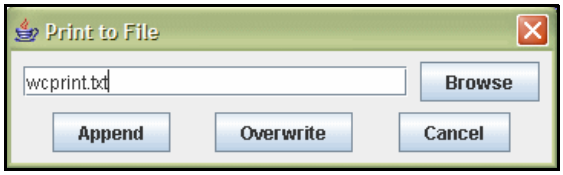


Figure 15-129: Print to File Dialog

Print date/time stamp, user ID, and PC host name will print two text lines at the top of the screen, as in the following example:

```
user1@abc.oc.com
```

27-Sep-02 3:35:29 PM

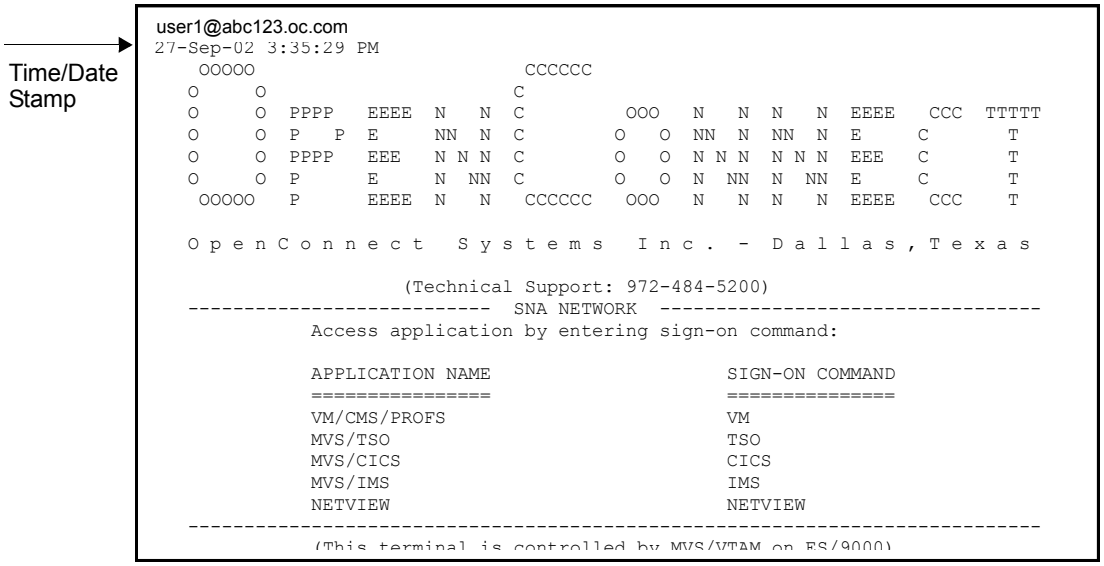


Figure 15-130: Print to File Time/Date Stamp

16 Swing Client File Transfer

WebConnect uses the standard IND$FILE protocol to transfer files between a Java client and an SNA host application. This capability can be used to address a variety of networking needs, including centralized data backups and data warehousing through an SNA host.

Note: The 3270 File Transfer menu option is only available if it is enabled by your administrator.

Because SNA host files use different file formats from WebConnect files and Java client files, be sure to use the appropriate options for converting files to the receiving host's file format during transfer. Format conversion allows the receiving host applications to use the file without further modification. SNA hosts and SNA applications used for transferring files are listed below as well as the IBM program number and operating system for each application:

Table 16-26: SNA Host/Application Transfer

Application Program	Program Number	Operating System
3270 PC File Transfer for CICS	5798-DQH	VS
3270 PC File Transfer for TSO	5665-311	MVS
3270 PC File Transfer for VM	5664-281	VM

- WebConnect supports only the DFT (Distributed Function Terminal) file transfer mode.

You must be familiar with the file transfer application program you use.

Select an option below for file transfer instructions:

- "Sending and Receiving CICS/VS Files" on page 224
- "Sending and Receiving TSO Files" on page 226
- "Sending and Receiving VM Files" on page 230
- "Multiple File Transfers" on page 233

Sending and Receiving CICS/VS Files

WebConnect allows file transfer between a Java client and the Customer Information Control System/Virtual Storage (CICS/VS) SNA application.

See the following steps to transfer files to and from CICS/VS.

1. Make sure that the WebConnect client is connected to the desired SNA host and CICS application.
2. From the File menu, select **File Transfer>To Host (or From Host)**. The appropriate file transfer window will display.
3. Select **CICS** tab.

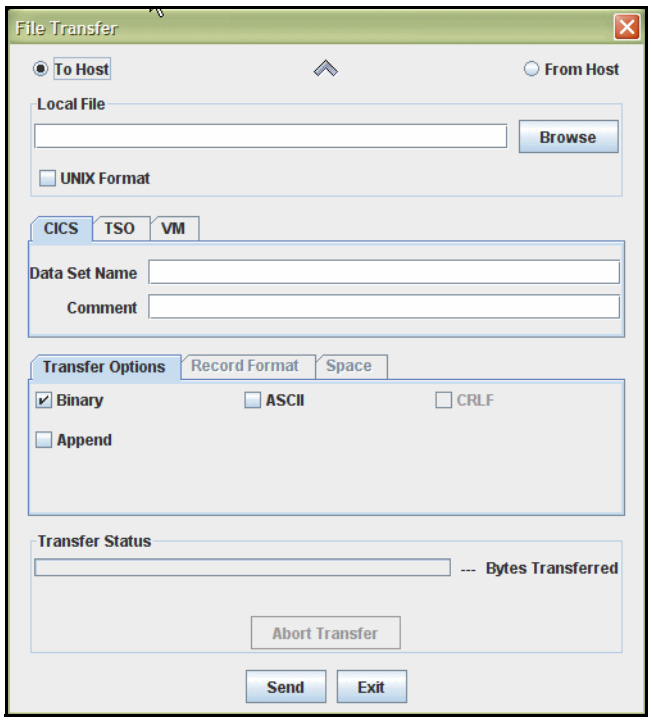


Figure 16-131: CICS/VS Files

4. Under **Local File** click **Browse** to search for a file. A file selection window will display.

Note: The procedures for searching for filenames will vary by system.

When you select a file the name will display in the text field of the Local File box.

UNIX Format

1. To transfer the file in UNIX format, click the UNIX Format button under Browse. UNIX format converts line separators to carriage return and line feed pairs during a Send operation. During a receive operation, carriage return and line feed pairs are converted to line separators.

   Do not select the UNIX format when using the binary option or the binary data will be corrupted.

2. Type a host filename in the Data Set Name field in the CICS Tab box.

Note: The CICS filename can be a program name, a transaction identification, or identification selected by the CICS/VS application programmer. If the filename does not exist, the CICS/VS application will automatically create it. The filename can be one to eight characters long. The character in the first position must be alpha; other characters can be alpha or numeric.

3. Type comments about the file being transferred in the Comment field in the CICS Tab. The comments will be automatically included in the first record of the CICS/VS host file.

Transfer Options

1. Select a file type from the Transfer Options box to configure the way the file contents are treated during the transfer process. The choices are described below:

   - ASCII
     This option instructs the SNA host to translate data between the EBCDIC and ASCII character formats. Use this option for transferring ASCII formatted files, such as text edit files or print files. Do not use the ASCII option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
   - Binary
     This option instructs the SNA host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.

2. Click Append if a local file is to be added to the end of an SNA host file or if an SNA host file is to be appended to a local file.

- If you do not select Append in the Receive dialog box, the SNA host file will replace the Java client file.
- If you do not select Append in the Send dialog box, the TCP/IP host file will replace the SNA host file.

3. If the CRLF option is desired, check CRLF.

> **Note:** If you do not specify the CRLF option in send mode, the SNA host disregards the local file's line separators.
>
> Do not use the CRLF option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
>
> Disabling the CRLF option in the Transfer Options dialog box instructs the CICS/VS host to copy the file unaltered to the appropriate TCP/IP host. This option can be used to transfer encrypted data, compiled programs, and other data that is unreadable.

4. Click **Send** or **Receive** to begin the file transfer.
5. A Transfer Status window will display to confirm the transfer was successfully completed. Click **OK**.

Sending and Receiving TSO Files

WebConnect allows you to transfer files between a Java client and the Time Sharing Option (TSO) SNA application.

See the following steps to transfer files to and from a TSO application from a User Session.

1. Make sure that the WebConnect client is connected to the desired SNA host and TSO application.
2. From the File menu, select **File Transfer>To Host** (or **From Host**).
3. Click the **TSO** tab.

   The appropriate file transfer window will display.

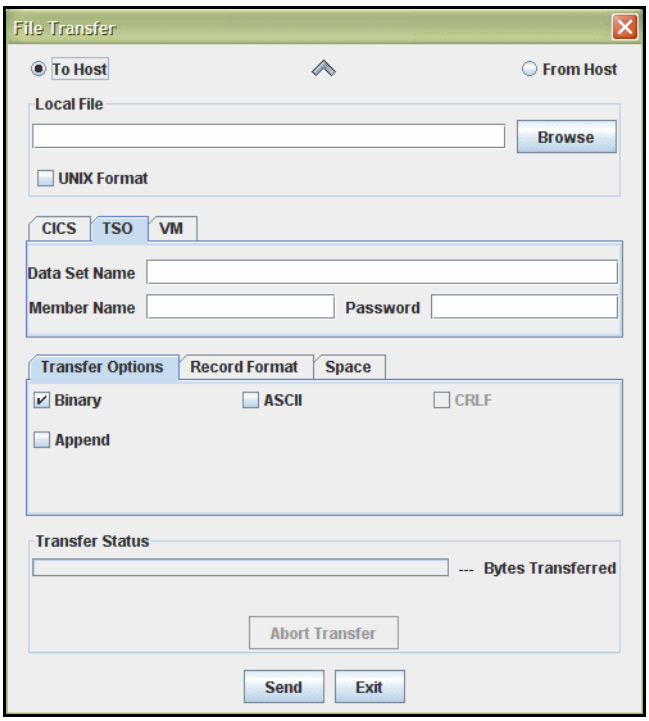


Figure 16-132: TSO File Transfer Example

4. Click Browse under Local File to search for the peer's file. A file selection window will display. for example, "Specify File to SEND." (The procedures for searching for the peer filename may differ by system.)

5. When you select the peer file and click Open, the name will display in the text field in the Local File box.

6. To transfer the file in UNIX format, click the UNIX Format button. UNIX format converts line separators to carriage return and line feed pairs during a Send operation. During a receive operation, carriage return and line feed pairs are converted to line separators.

7. Type a host filename in the Data Set Name field.

8. Type a member name in the Member Name field.

Note: The TSO host data set name must conform to IBM naming conventions. You can enter an existing data set name (stored in your library) or a new data set name. A closing quote will not display in the Member Name field.

The member name is optional. If entered, the member name should be a member in a partitioned data set directory.

9. WebConnect does not create the partitioned data set. When you use the Send window to copy a file to a partitioned data set and include a member name, the partitioned data set must exist.

10. The TSO application adds a user ID prefix to the combined data set and member name. To eliminate the user ID prefix, enclose the data set and member name in single (right) quotation marks, for example,'smith.pds2.file1.'

11. If a password is required, type it in the Password field. A password is only required if password-protection has been specified for the TSO data set.

12. Select a file type from the Transfer Options box to configure the way the file contents are treated during the transfer process. The choices are described below:
    - ASCII—this option commands the SNA host to translate data between the EBCDIC and ASCII character formats. Use this option for transferring ASCII formatted files, such as text edit files or print files. Do not use the ASCII option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
    - Binary—this option instructs the SNA host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.

Note: If you select the UNIX Format option when using the Binary option, the binary data will be corrupted.

Append a File

1. Click Append if you plan to add a local file to the end of an SNA host file, or you will append an SNA host file to a local file. The Append option will override other values specified by the LRECL parameter and RECFM options in the Advanced section.
    - If you do not select Append in the Receive dialog box, the SNA host file will replace the Java client file.
    - If you do not select Append in the Send dialog box, the TCP/IP host file will replace the SNA host file.

Record Format and Space Options

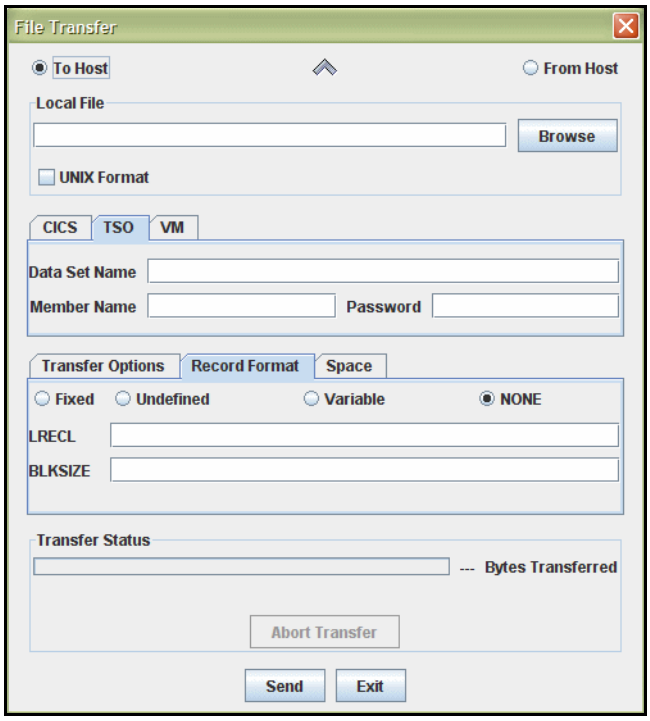


Figure 16-133: Record Format Options

1. In the Record Format box, click a radio button for the desired record format. This is only valid when sending a file. The valid values are described below:
   - Fixed—indicates the data set's records are fixed length.
   - Variable—indicates the data set's records are variable length.
   - Undefined—indicates the data set contains undefined record lengths.
   - None—indicates no record format is to be used.
2. To set the allocated amount of space for a new data set, click Blocks, Tracks, or Cylinders on the **Space** tab. When you select Default, TSO uses the Blocks parameter default value which is determined by the specifications listed below:
   - Blocks—use the smallest storage entity.
   - Tracks—use the middle-sized storage entity.
   - Cylinders—use the largest storage entity.
   - Primary—the primary allocation for the Blocks parameter.

- Increment—the increment allocation for the Blocks parameter.

3. If sending a file, type a size value (such as the data block size of a TSO data set) in the BLKSIZE field in the Record Format area. The variable you type represents a data block's byte count. The default value is 80.

4. Type a logical record length value of the SNA host file in the LRECL field in the Record Format area. The parameter value represents the number of characters for each record. If the parameter is not entered, the record length is determined by the file transfer operation. For new files, the parameter's default value is 80.

5. The characteristics of the existing file are used if you are replacing a file or appending information to a file. If you are transferring variable length records, the parameter represents the maximum record size. The parameter's value becomes the longest record sent if you do not send a record of the maximum operating system size; only valid if you are sending a file.

6. Click **Send** to begin the file transfer.

7. Transfer Status will display at the bottom of the dialog to confirm the transfer was successfully completed. Click **Exit**.

Sending and Receiving VM Files

WebConnect allows file transfer between a Java client and the Virtual Machine/Conversational Monitor System (VM) SNA application.

See the following steps to transfer files to and from a VM application.

1. Make sure that the WebConnect client is connected to the desired SNA host and VM application.

2. From the File menu, select **File Transfer>To Host** (or **From Host**). The appropriate file transfer window will display.

3. Click **VM** tab.

4. Click **Browse** under **Local File** to search for the peer's file. A file selection window displays. The procedures for searching for the peer filename vary by system.

5. Select the peer file. The name displays in the text field in the Local File box.

To transfer the file in UNIX format, click the UNIX format button. UNIX format converts line separators to carriage return and line feed pairs during a Send operation. During a receive operation, carriage return and line feed pairs are converted to line separators.

6. Type a host filename in the Data Set Name field in the **VM** tab. The VM filename can be one to eight characters long.

Note: The VM application automatically creates the receiving host's filename if a filename does not exist.

7. Type the appropriate file type in the VM File Type field. This parameter identifies the VM disk file type.

8. Type an appropriate value in the VM File Mode text box. This parameter identifies the VM disk file mode. If you do not enter a file mode parameter, the VM application uses the A1 default value.

9. Select a file type from the Transfer Options box to configure the way the file contents are treated during the transfer process. The choices are described below:
   - ASCII—this option instructs the SNA host to translate data between the EBCDIC and ASCII character formats. Use this option for transferring ASCII formatted files, such as text edit files or print files. Do not use the ASCII option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
   - Binary—this option instructs the SNA host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.

Caution: Do not select the UNIX Format option when using the Binary option or the binary data will be corrupted.

10. Click Append if a local file is to be added to the end of an SNA host file or if an SNA host file is to be appended to a local file.
    - If you do not select Append in the Receive dialog box, the SNA host file replaces the Java client file.
    - If you do not select Append in the Send dialog box, the TCP/IP host file replaces the SNA host file.

- To use the CRLF option, check CRLF.

Note: You can click the UNIX Format check box for ASCII file transfers. This allows line separators to be converted to carriage return and line feed pairs during a Send operation.

- During a Receive operation, carriage return and line feed pairs are converted to line separators.
- Disabling the CRLF option in the Transfer Options dialog box instructs the CICS/VS host to copy the file unaltered to the appropriate TCP/IP host. This option can be used to transfer encrypted data, compiled programs, and other data that is unreadable.
- If you do not activate the Append option in the Receive dialog box, the SNA host file replaces the Java client file. If you do not activate the Append option in the Send dialog box, the TCP/IP host file replaces the SNA host file.

Caution: Do not use the ASCII or CRLF options for binary data such as output data from a data base program or object code files such as C compiler object code.

11. To specify the record format, LRECL, click the **Record Format** tab.

12. In the Record Format area, click a radio button for the desired record format. This is only valid when sending a file. The valid values are described below:
    - Fixed—indicates the data set's records are fixed length.
    - Variable—indicates the data set's records are variable length.
    - Undefined—indicates the data set contains undefined record lengths.
    - None—indicates no record format is to be used.

13. Type a logical record length value of the SNA host file in the LRECL field in the Record Format area. The parameter value represents the number of characters for each record. If the parameter is not entered, the record length is determined by the file transfer operation. For new files, the parameter's default value is 80.

    If you are replacing a file or appending information to a file, the characteristics of the existing file will be used. If you are transferring variable length records, the parameter represents the maximum record size. If you do not send a record of the maximum

operating system size, the parameter value becomes the longest record sent. This is only valid if you are sending a file.

14. Click **Send** again to begin the file transfer.

15. Transfer Status will display at the bottom of the dialog to confirm the transfer was successfully completed. Click **Exit**.

Multiple File Transfers

The WebConnect applet supports IND$FILE multiple file transfers. You can create and add files to a multi-file list, then transfer them as a group of files. These lists can be saved, edited and deleted from this menu.

Please refer to ”Sending and Receiving CICS/VS Files” on page 224 for basic file transfer procedures and windows.

1. Select **File>File Transfer Lists** from the applet menu.

2. Select the **Host Environment of either CICS, TSO, or VM.**

   Any lists you have previously saved will display.

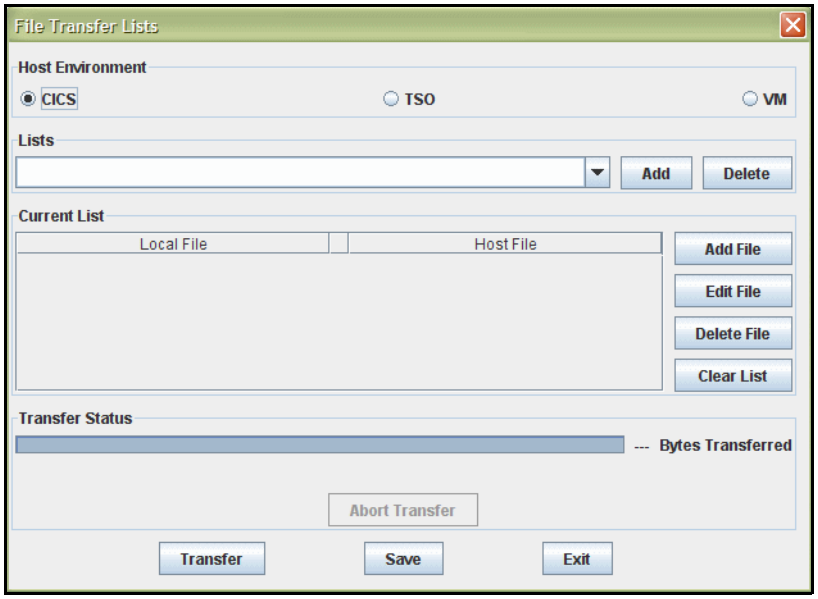


Figure 16-134: Lists

3. Type a new list name and click **Add**.

4. Click **Add File** in the Current List area of the window. The INDFILE Transfer box displays.

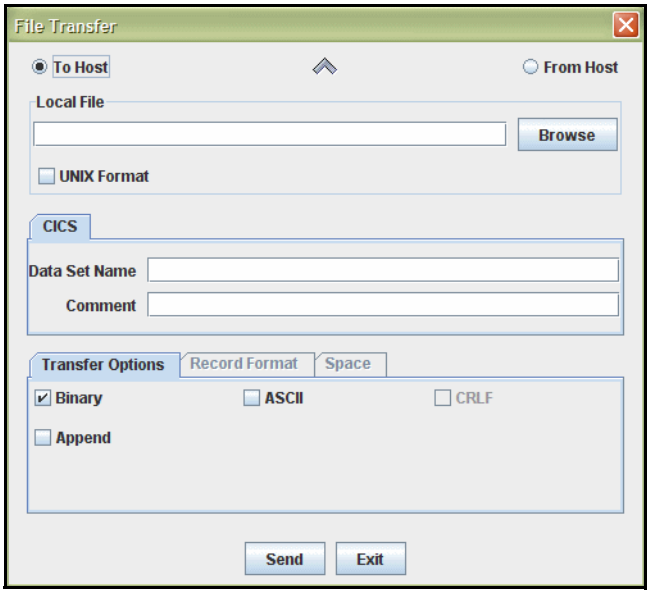


Figure 16-135: INDFILE Transfer

5. Select **To Host** or **From Host**.
6. To select a local file, click the Browse button.
7. Name the file in the *Data Set Name* field and select other appropriate data.
8. Click **Send** or **Receive** to add this file to the list.
   a. To clear the list, click the **Clear List** button.
   b. To define and save the list, click **Save**.
   c. To delete a file from the list, select a file in the list and click **Delete File**.
   d. To replace a file in the list, select a file in the list and click **Edit File**.
9. When all the files you want to transfer are in the Current List area click **Transfer**.

   Transfer Status will display at the bottom of the dialog to confirm the transfer was successfully completed. Click **Cancel**.

17 Swing Client User Preferences

This chapter contains information about editing user emulation session preferences from the menu bar of the Emulator Screen. The following topics are covered:

- ”Preferences Menu” on page 238
  - ”Configuring Colors” on page 238
  - ”Configuring Attributes” on page 239
  - ”Configuring the ClickPad” on page 240
  - ”Configuring Hot Spots” on page 248
- ”The Settings Menu” on page 250
  - ”Cursor Options” on page 254
  - ”Type-ahead” on page 255
  - ”Move Cursor with Mouse (Light Pen)” on page 256

Preferences Menu

This section contains information about the options available from the **Preferences** menu on the Emulation Client menu bar that control.

Configuring Colors

1. To change or enhance the color configuration, select **Preferences>Colors** from the menu.

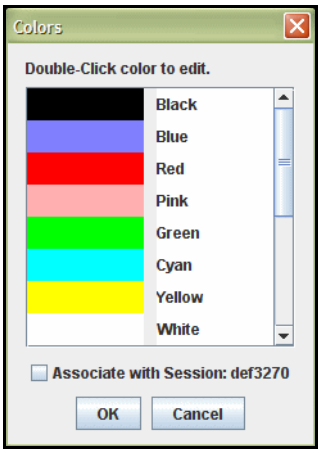


Figure 17-136: Edit Color Configuration

2. To edit a color, doubleclick the color you want to change.

   The color chooser dialog box appears.

3. Click on one of the basic colors or create a custom color and click **OK**.

> **Note:** The **Associate with session:** box allows you to associate the color values with your user ID and the session file name. When selected, the settings will apply to all sessions that you start with the same WebConnect session file. For example, using userid and 3270, the user's local filename will be userid.cm3. If saved for the specific session (as in def3270 for this example), the filename would be userid-def3270.cm3.

4. Repeat as necessary and then click **OK**.

> **Note:** To assign or change a specific attribute color, see Configuring Attributes below.

Configuring Attributes

Various screen behaviors associated with fields can be configured through the Attributes panel. Complete the following steps to edit your screen attributes and colors.

1. Select **Preferences>Attributes**.

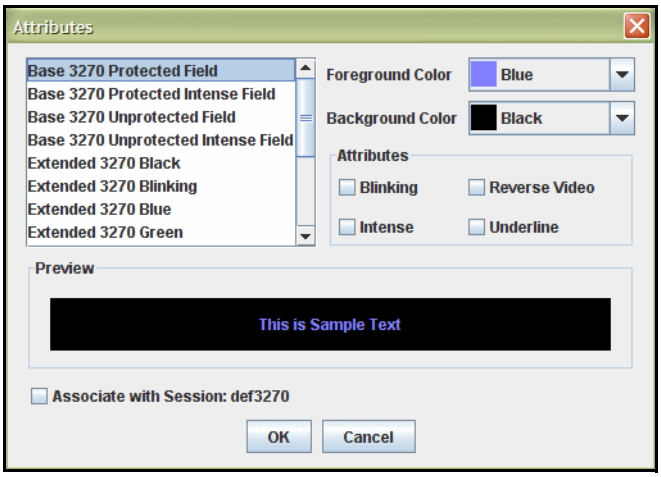


Figure 17-137: Attribute Configuration

2. The attribute configuration window displays an example of attributes supported by the terminal type (3270/5250/VT).
3. Select an attribute from the list.
4. Select a Foreground and Background color from the drop-down lists.

5. Select an Attribute such as Blinking, Reverse Video, Intense, or Underline if desired.

> **Note:** The **Associate with session:** box allows you to associate the attribute values with your *user ID* and the *session file* name. When selected, the settings will apply to all sessions that you start with the same WebConnect session file. For example, using userid and 3270, the user's local filename will be userid.at3. If saved for the specific session (as in def3270 for this example), the filename would be userid-def3270.at3.

6. Click **OK** when you complete the changes.

> **Note:** To change the color configuration, see ”Configuring Colors” on page 238.

Configuring the ClickPad

Each emulation session type (3270, 5250 and VT) has an associated ClickPad for that session type. Swing (JAVA) and .NET clients have a feature listed under the Preferences Menu called ClickPad. Options under this feature allow users to customize the clickpad for their personal use. The user can add or delete keys, add macros, insert padding (blank buttons) to separate keys into groups and rearrange the ClickPad to the user's display preference.

When customizing, the user can apply the custom clickpad to all like session types, meaning all 3270 sessions or all 5250 sessions etc., or assign the custom clickpad to a particular session, solely for use with that particular session.

ClickPad Configuration: Row/Col Size and Docking Position

The Row/Col Size box allows the user to determine how many keys to place in a row (applicable in the East/West Docking Position) or in a column (applicable in the North/South Docking Position). Docking Position is not applicable to .NET client therefore the Row/Col Size determines the rows displayed.

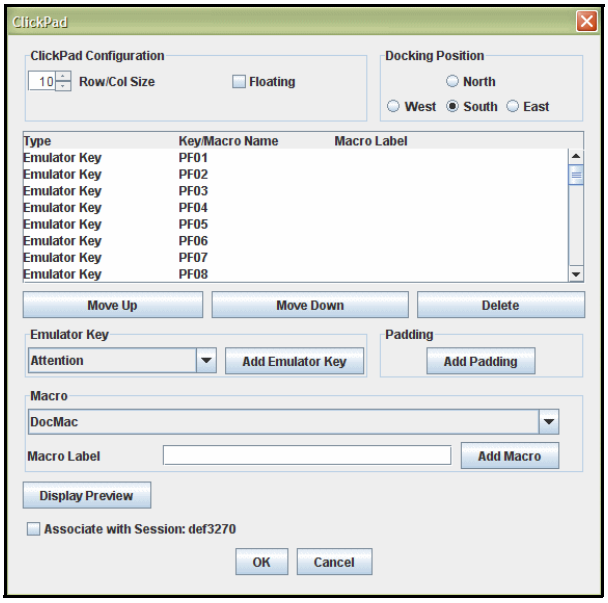


Figure 17-138: ClickPad Configuration

In the following example, the Docking Position is East, and the Row/Col is set at 10. There are 10 rows of keys.

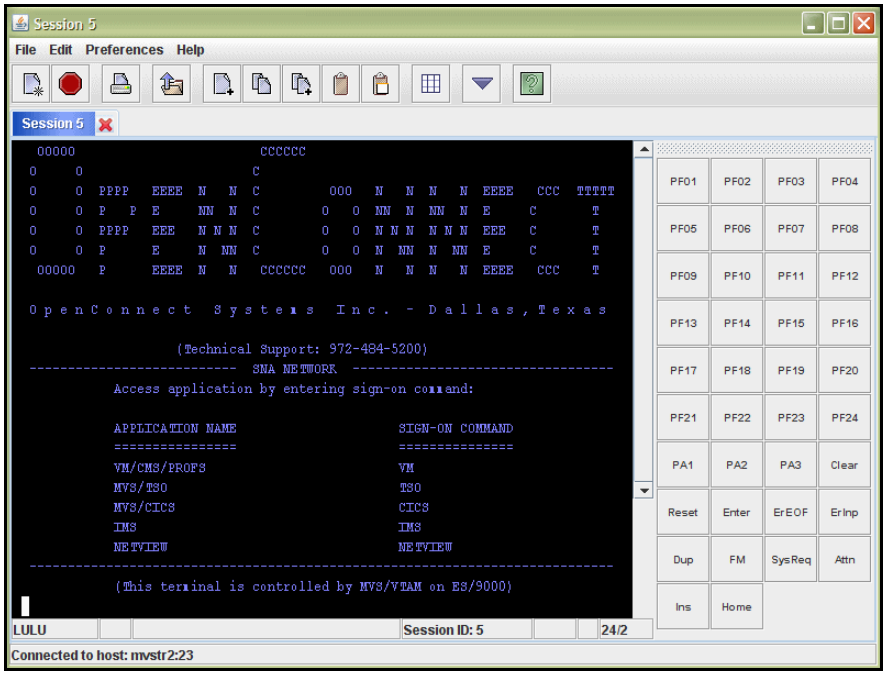


Figure 17-139: ClickPad Docked East

In the next example, the Docking Position is North and the Row/Col is set at 10. There are 10 columns of keys.

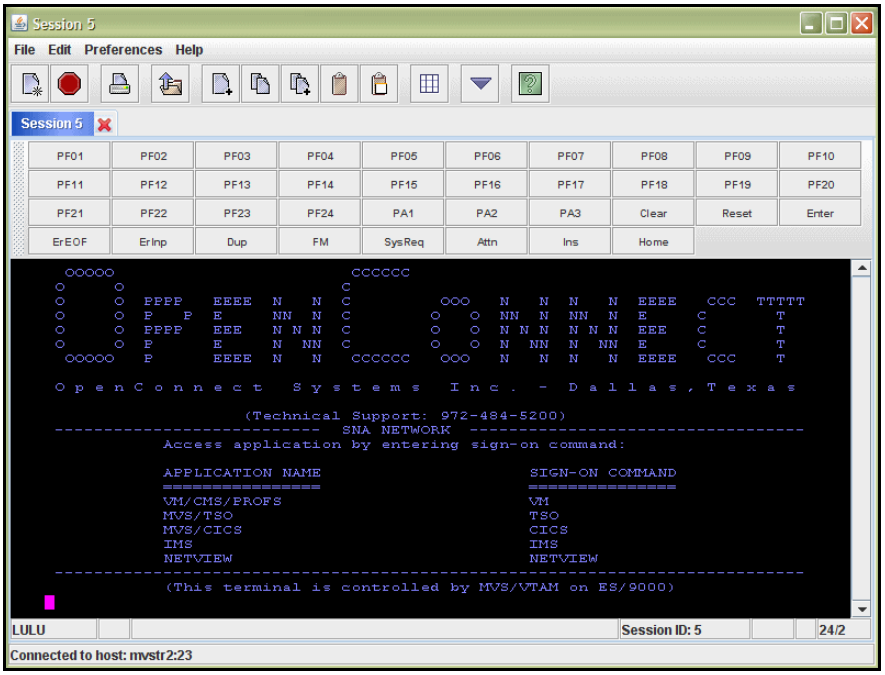


Figure 17-140: ClickPad Docked North.

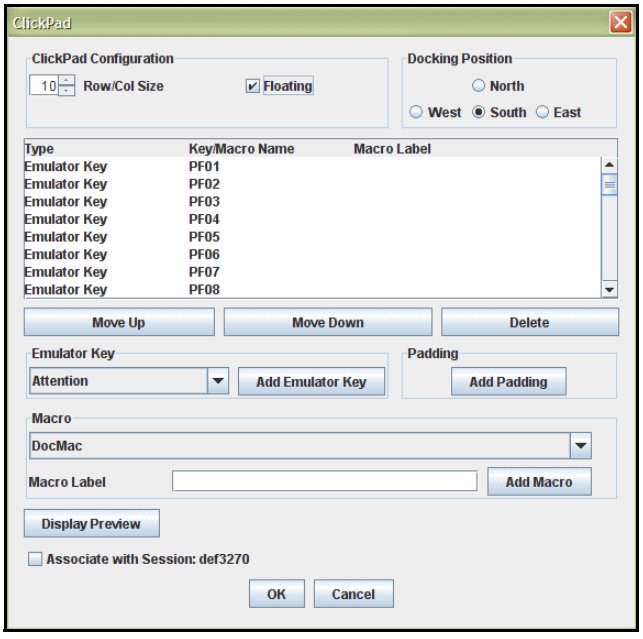


Figure 17-141: Floating Enabled

Floating ClickPad

When the Floating checkbox is enabled, the ClickPad is totally detached from the session screen allowing the user to position it anywhere on their desktop display. The Floating ClickPad window will only be displayed when the associated session has focus on the screen. To bring it back to the session, click on the **x** in the upper right hand corner and the ClickPad will dock either North or West.

You can also detach the ClickPad *temporarily* from the session by placing the cursor on the handler bar (the dotted bar) and dragging the ClickPad anywhere on the display space.

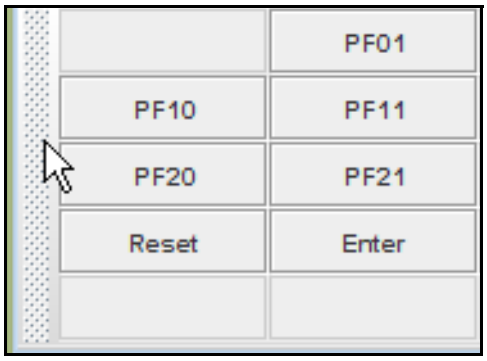


Figure 17-142: Handler Bar

To bring it back to the session, click on the **x** in the upper right hand corner and the ClickPad will return to its original position.

Emulator Keys: Move Up, Move Down and Delete Buttons

Each emulator type (3270, 5250 or VT) will automatically accommodate the normal clickpad keys associated with the type of session.

The **Move Up** and **Move Down** buttons provide the user with the ability to rearrange the layout of the ClickPad. To do this, simply place the cursor over the key that you want rearranged and use the **Move Up** and **Move Down** buttons to position the key to the desired location.

The **Delete** button provides the ability to remove keys from the ClickPad.

Note: All associated standard session keys are also stored in the Emulator Key section, so if you accidentally *delete* a standard session key, you can always *add* it back.

Emulator Key Section

The Emulator Key drop down box contains a list of emulation keys for selection.

As stated earlier, all relative session type standard keys are in this list as well as some additional keys that might be desired. After making a selection, press the Add Emulator Key button to add the selected key to the ClickPad.

Padding

The Add Padding button is used to place padding (blanks or spacers) between sets of keys. In the example below, an Add Padding button was placed after PF24 to separate the PF keys from the PA keys and an **Add Padding** button was placed before the first macro key to place macros in their own row. See Figure 17-143, on page 245.

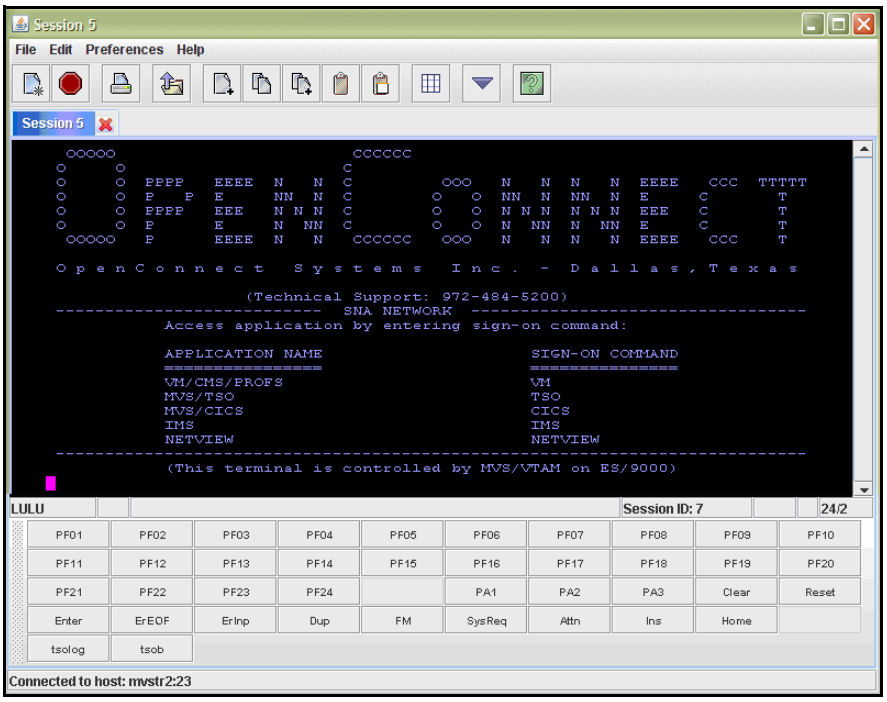


Figure 17-143: Padding

Macro Section

If you have created macros and would like to add a button on the clickpad for a macro, select the desired macro from the Macro drop down box, optionally, assign it a key label in the Macro Label box and click **Add Macro**. Use the **Move Up** and **Move Down** buttons for key placement on the ClickPad.

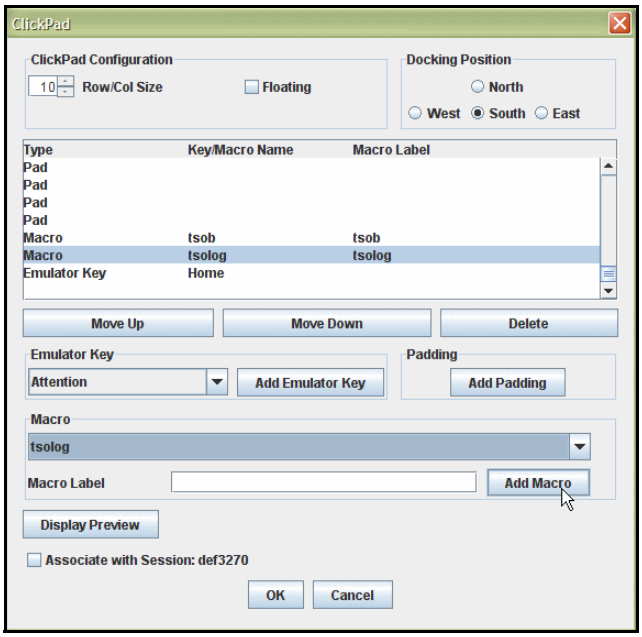


Figure 17-144: Add Macro

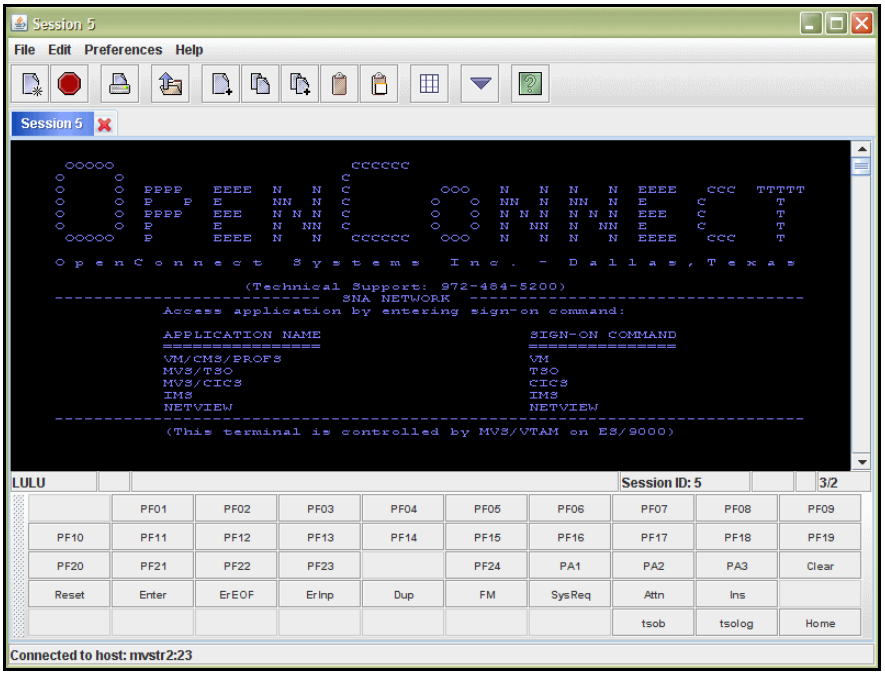


Figure 17-145: Macros

Display Preview

Clicking on the Display Preview button will display a preview screen of what the ClickPad will look like prior to selecting the **OK** button.

If all looks well, simply close the window on the preview screen with the **x** button in the upper right hand corner and click the **OK** button.

Display Preview
PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08 PF09
PF10 PF11 PF12 PF13 PF14 PF15 PF16 PF17 PF18 PF19
PF20 PF21 PF22 PF23 PF24 PA1 PA2 PA3 Clear
Reset Enter ErEOF Erlnp Dup FM SysReq Attn Ins
tsob tsolog

Figure 17-146: ClickPad Preview

If the outcome was not as desired, close the preview window and continue customizing your ClickPad.

Note: Note: The **Associate with session:** option allows you to associate the clickpad values with your *user ID* and the session file name. When selected, the settings will apply to all sessions that you start with the same WebConnect session file type. For example, using userid and 3270, your local filename will be userid.ck3. If saved for the specific session (as in def3270 for this example), the filename would be userid-def3270.ck3.

Configuring Hot Spots

Hot Spots configuration allows you to select and display the definition of text strings as clickable buttons when the strings appear on the screen.

Complete the following steps to set or modify hot spots.

1. Start your client session.

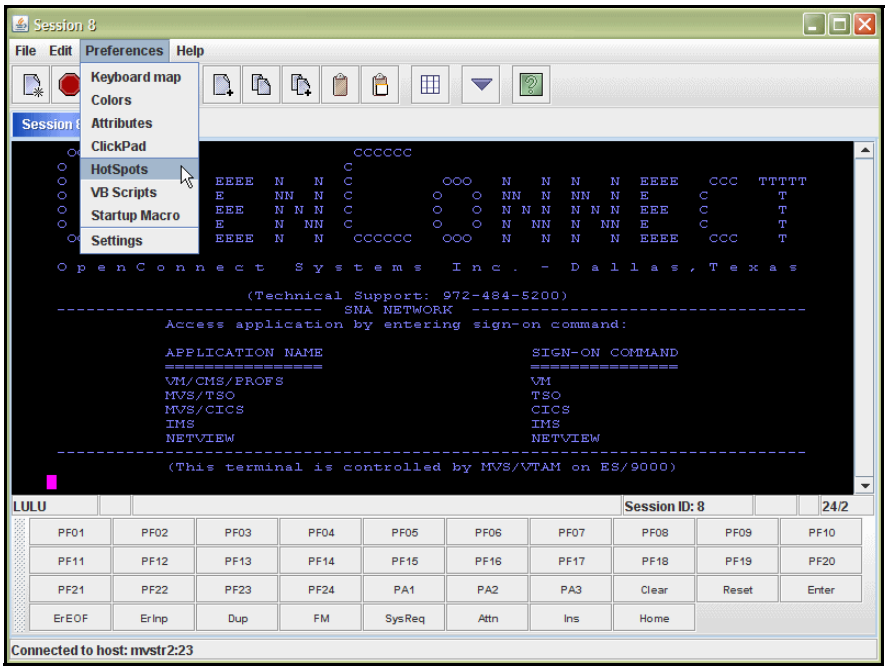


Figure 17-147: Edit User Preferences

2. Select **Preferences>Hot Spots** from the Menu.

   The Hot Spot Configuration screen displays.

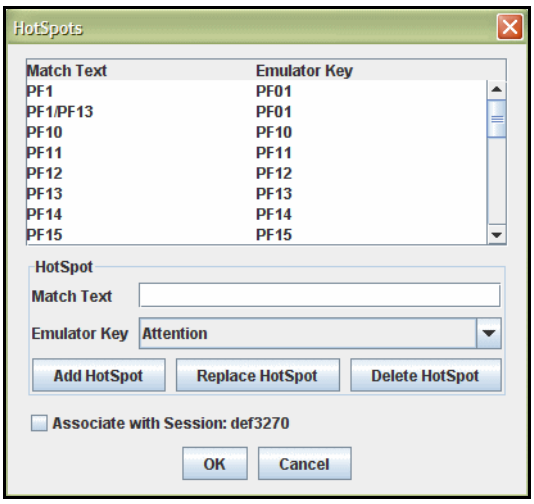


Figure 17-148: Configure Hot Spots

3. To edit existing HotSpot:

   a. Highlight the **Emulator Key** you wish to edit.

   b. Enter new text into the **Match Text** field.

   c. Click **Replace HotSpot**.

4. To add a New HotSpot:

   a. Type the text into the **Match Text** field

   b. Select an **Emulator Key** from the pull-down menu.

   c. Click **Add HotSpot**.

5. Repeat the preceding steps for each hot spot change you want to make.

> **Note:** The **Associate with session:** option allows you to associate the hot spot values with your user ID and the session file name. When selected, the settings will apply to all sessions that you start with the same WebConnect session file. For example, using userid and 3270, your local filename will be userid.hs3. If saved for the specific session (as in def3270 for this example), the filename would be userid-def3270.hs3.

6. Click **OK**.

The Settings Menu

This section contains information about the options available from the **Preferences>Settings** menu on the Emulation Client menu bar.

The Settings window appears when **Preferences>Settings** is selected.

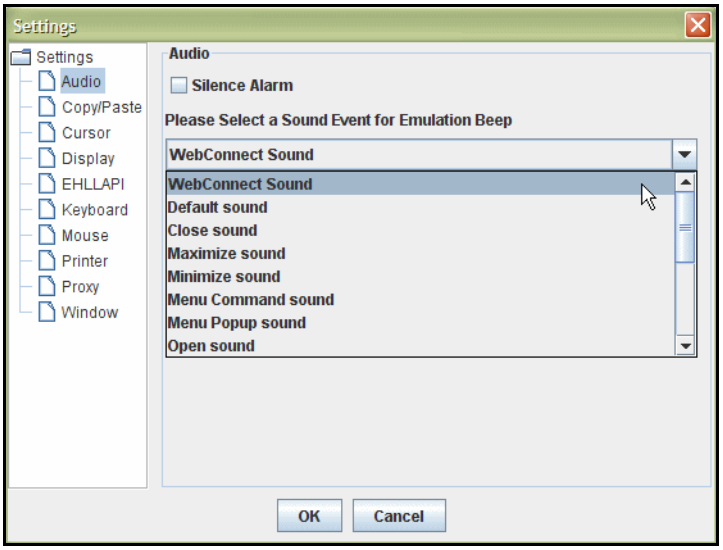


Figure 17-149: Settings

Table 17-27: Settings Options (Sheet 1 of 4)

Menu	Item	Definition
Audio	Silence Alarm	Disable Audio Alarm
	Please Select a Sound Event for Emulation Beep	Use the default WebConnect Beep or choose an alternative from the list. Note: Sounds must be configured in OS prior to use by WebConnect.
Copy/Cut	Stream	Copy/Cut all fields between the beginning of the selection and the end of the selection.
	Block	Default mode. Copy/Cut the columns inside the selection rectangle.
	Suppress Trailing Carriage Return on Copy	Removes last CR from copied text.

Table 17-27: Settings Options (Sheet 2 of 4)

Menu	Item		Definition
Paste	Stream		Characters from the paste buffer are processed as if typed by the user and advance from field to field based on the screen's layout.
	Block		Attempts to paste the buffer onto the screen in a one-to-one model. Each line of the data maps to one row of the screen. Each character in that line is placed in the corresponding location on the screen if the location is *unprotected*.
	Hybrid		Block paste with word wrapping. Paste starts at the current cursor location; all continuing fields will start at the same column location. If starting cursor location is a protected field the paste is terminated. Word and rest of the line are wrapped to next field(s) if it can not fit in current field.
	Paste By Fields (Stream/Hybrid Only)		Disabled by default. When enabled WebConnect detects TAB characters in the clipboard text. If disabled, TAB characters will be converted to ASCII SPACE characters.
Cursor	Text Cursor	Blinking Cursor	Set Cursor to Blink
		Cursor Type	Block (choice)
			Underline (choice)
		Cursor Behavior	Invert Text Color (choice)
			Fixed Color (choice)
		Cursor Color	Pick a cursor color.
	Rule Lines	Display Rule Lines	Enable rule lines.
		Horizontal	Display horizontal lines.
		Vertical	Display vertical lines.
		Short Lines	Use short lines.
		Rule Line Color	Pick a line color.

Table 17-27: Settings Options (Sheet 3 of 4)

Menu	Item	Definition
Display	Show ClickPad	Display ClickPad if enabled.
	Show HotSpots	Display Hotspots if enabled.
	Show ToolBar	Display ToolBar if enabled.
	Display Font Family	Show current font family.
	Enable 3270 ScrollBack	Allow scrolling of 3270 screen history. Set number of 3270 screens to keep in history.
	Enable 5250 ScrollBack	Allow scrolling of 5250 screen history. Set number of 5250 screens to keep in history.
	Enable VT ScrollBack	Allow scrolling of 3270 screen history. Set number of VT lines to keep in history.
	Browse Fonts	Browse available fonts.
	Look and Feel	Toggle between Java and Platform. Java (default) emulation windows use SUN Java UI components. Platform emulation windows attempt to reflect system feel, Windows feel for Windows and Mac feel for Apple, etc.
EHLLAPI	Enable EHLLAPI	Check to enable EHLLAPI
Keyboard	TypeAhead	See ”Cursor Options” on page 254.
	Lock Backspace to Field	Prevent backspace out of current field.
	Destructive Backspace	Erase when backspacing.
	Word Wrap (3270 only)	Disabled by default. When typing in a text field, unprotected field, and cursor is at the last location on the field, the entire word is moved to the next field preventing word splits. A word is defined as 2 or more contiguous characters separated by spaces.
Mouse	Move cursor with Ctrl+Left Button (3270/5250 only)	See ”Move Cursor with Mouse (Light Pen)” on page 256.
	Select Word with Left Button Double-click (3270/5250 only)	Double clicking a location on the display moves the cursor to that location and selects the entire contents of the field. On the first click of the double click, the cursor to mouse action will be performed if enabled. In any case, the cursor will be moved on the second click as part of the *select field* behavior.

Table 17-27: Settings Options (Sheet 4 of 4)

Menu	Item		Definition
Printer	Show Printer Dialog		Display printer dialog. Applicable only to WebPrint.
	3287/3812	AutoFit Printer Font	Automatically correct printer font to fit page.
		Raw Mode Printing	Print without formatting.
Proxy	Hostname		Set Hostname of proxy server.
	Port		Set Port of proxy server.
Window	Save Window State/Position		Retain window state/position
	Initial Window State (if not saved)	Normal	Window appears as normal at start up.
		Iconified	Window is iconified at start up.
		Maximized	Window appears maximized at start up.

Cursor Options

A cross-hair cursor makes it easier for you to view full lines of data (vertical or horizontal rule, or both) on any emulation screen. To select this function, complete the following steps.

1. To activate the cursor options, select **Preferences>Settings>Cursor** from the menu. This option is only available to you if your System Administrator has given you permission for this setting in your session profile.

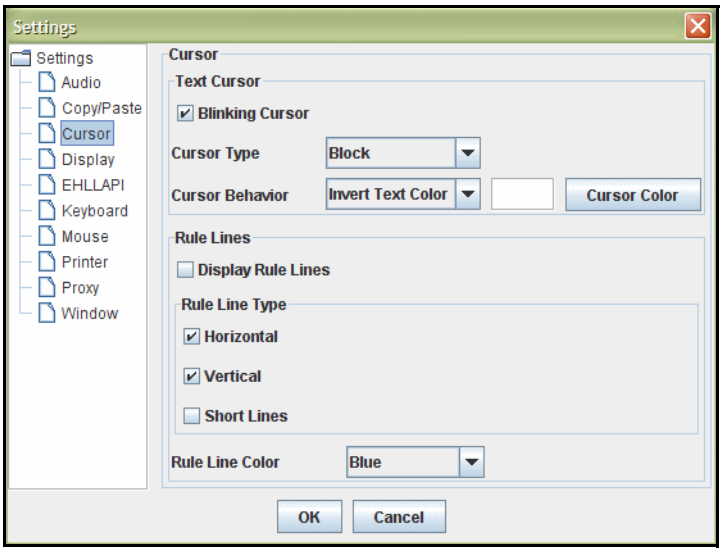


Figure 17-150: Settings Cursor Menu

2. You will find many options with this feature as described below:
   - Rule Lines: select rule lines off/on.
   - Horizontal Rule: select to view the horizontal rule.
   - Vertical Rule: select to view the vertical rule.
   - Short Rules: select to view the short rule or deselect to view the long rule across the entire screen.

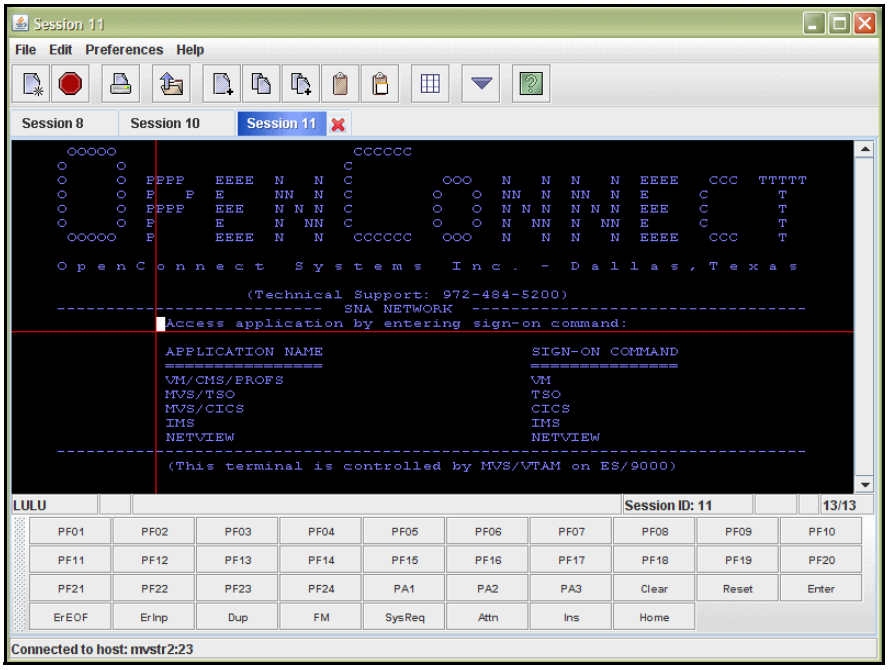


Figure 17-151: Cross-hair Cursor

3. Select a color for the rule line using the drop-down menu.

Type-ahead

In a normal 3270 or 5250 sessions, the keyboard locks after you press Enter or another AID key, and it will remain locked until the next buffer of information is received from the host. Enabling this option allows the next string of host information to enter a buffer without waiting for the next host screen. When the next host screen returns, WebConnect sends the saved buffer of information to the host.

1. To enable **Type-ahead**, select the number of buffers to use from the **Type-ahead** submenu (Type-ahead is enabled by default).

2. To disable **Type-ahead,** select Disable from the **Type-ahead** submenu.

Move Cursor with Mouse (Light Pen)

The Light Pen feature is designed to perform on-screen actions with or without using the keyboard. You can use it either of two ways.

1. Use **Shift + Left Mouse Button** (default).

   Or you can activate the cursor to mouse operation from the **Preferences>Settings>Mouse** Menu.

2. Enable the **Setting>Mouse>Move cursor with Left Button (3270/5250 only)** feature and click the right mouse button for the global Light Pen functionality, as follows.
   - Click the right mouse button and position the cursor in a light pen field to invoke the light pen functionality.
   - Click and drag the cursor within a field to invoke the default block/highlighted functionality.

18 Swing Client WC Key Map, Macro, and VB Script Editor

The WebConnect Key Map/Macro Editor provides a way to create key commands and WebConnect Macro for 3270, 5250, or VT sessions.

Key Commands on page 260.

- Create a keyboard command by assigning a key or key sequence to a key combination.
- Allows users to access custom macros or key commands that were created by an administrator.

WebConnect Macros on page 266.

- Create a user, session, or server-level macro including basic program controls such as *goto*, *input variables*, *prompts*, *wait statements*, and other variables.
- Import, play, or edit pre-defined, third-party macros such as *“Rumba *.rmc”* macros.

VB Scripts on page 272.

- Create and edit user or session-level VB Scripts.
- Import and edit pre-defined, third-party macros such as *Attachmate EXTRA! *.ebm”* macros.
- Ehllapi must be enabled for this feature to appear. See ”3270, 5250, and VT Client Emulation Features” on page 50 and *The WebConnect User Guide.*

You can enable the Macro toolbar to make your macros easier to use, see ”Macro Toolbar” on page 53 for more details.

User Key Map Configuration Window

To use the WebConnect Macro Editor complete the following steps:

1. Select a session (3270, 5250, or VT) from the SESSION panel, shown in Figure 18-152, by clicking on it.

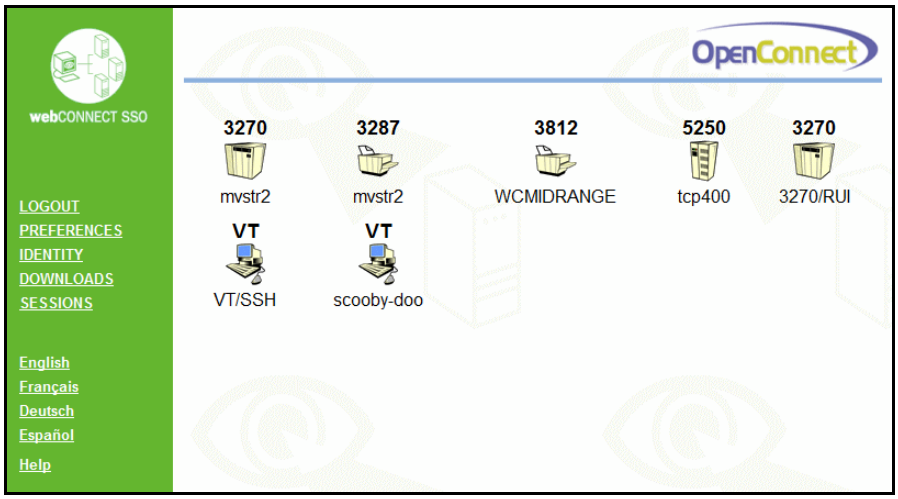


Figure 18-152: SESSION panel

2. The session opens in a separate window as shown in Figure 18-153.

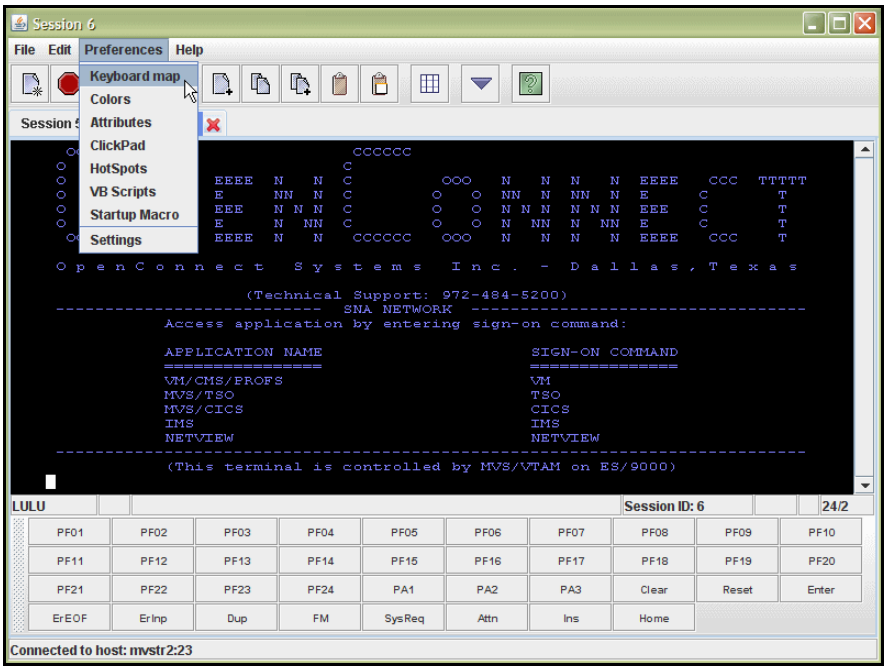


Figure 18-153: Key Map Menu

3. Select **Edit>Preferences>Key Maps**.

   The User Key Map Configuration window displays showing a Key Commands tab by default, as well as a WebConnect Macro tab.

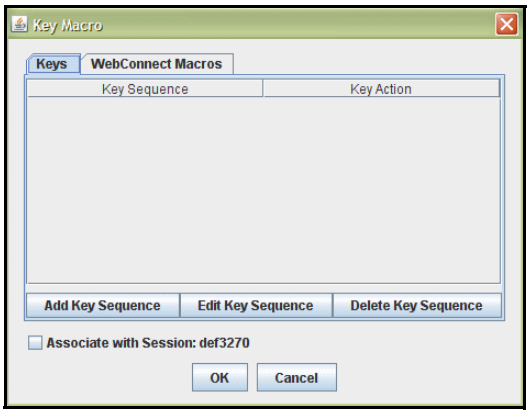


Figure 18-154: Key Map/Macro Configuration

4. Select the tab for the one you intend to create or edit for this session. See ”Key Commands” on page 260, or ”WebConnect Macros” on page 266, or ”VB Scripts” on page 272.

Associate with session: is grayed out and does not apply to VB Scripts.

Key Commands

Creating a New Key Command

1. Select the **Keys** tab (default tab).
2. Click **Add Key Sequence**.

   A dialog box appears as shown in Figure 18-155, on page 260.

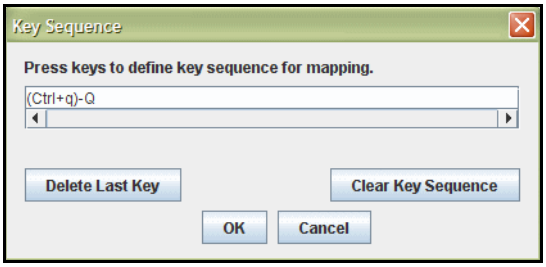


Figure 18-155: Create Key Sequence

3. On the keyboard, enter the key or key sequence command you want to map. The selected keys automatically display in the shaded **Key Sequence** box.
4. When you have completed the key commands, click **OK**.

   The Key Sequence editor appears as shown in Figure 18-156, on page 261.

The title bar of the panel displays the key sequence you entered.

Editing a Key Command

To edit a Key Command complete the following steps:

1. Select **Edit Key Sequence**. The panel shown in Figure 18-156 displays where commands can be mapped to the key(s) you entered.

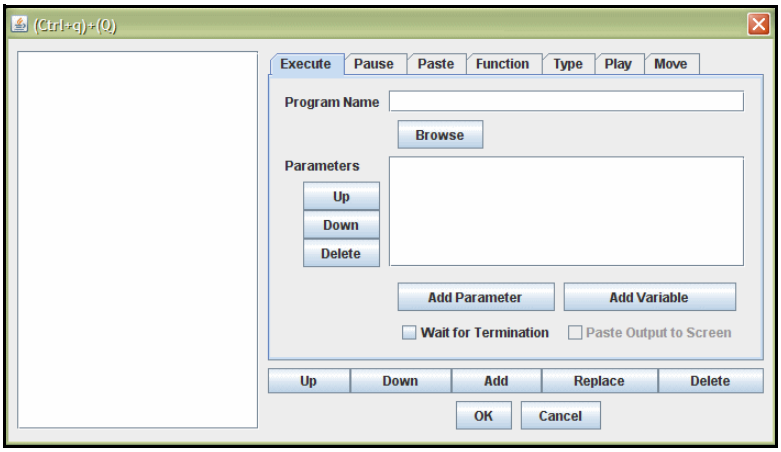


Figure 18-156: Add Key Map Commands

Note: You can add multiple commands to a key command. Table 18-28 on page 261 contains the command menu definitions.

2. Select a command from the buttons menu that you want to add to the key command.

3. Click **Add** after each change.

Table 18-28: Macro Editor Command Descriptions

Command		Description
Execute	Use to execute a program external to the applet. You can specify any command line parameter needed by the program within the function configuration.	
	Variable	A variable **String** (add a name and value). A variable **Screen** places screen data at row/column, and places it in the variable "name." You can specify 1) the length of screen data, 2) end of word, or 3) end of field. A variable **Prompt** to create a specified 1) title, 2) message, 3) input length.
Pause		Use to pause the system for either a time interval or for a user response. User response mode allows setting a text message but does not capture any input data.
Paste		Use to copy and then paste the contents of the configured file into the current cursor position within the emulation.
Function		Add a selected function to this command from a pull-down menu. A definition for each function displays in the shaded box. You can find all standard **AID Keys**, such as **Enter**, **Clear**, **PF1** through **PF2 4**, **PA1**, etc., under Function.

Table 18-28: Macro Editor Command Descriptions (Continued)

Command	Description
Type	Define characters and/or strings which are input as keystrokes. Also used to type the value of a selected variable or the current user ID and password values.
Play	Execute a previously defined macro from a drop-down list.
Move	Moves the cursor to the configured row/column.
Wait	Use to enter a wait statement, see ”Wait” on page 262, Table 18-29 on page 263.
Prompt	Prompt the user for input which can be assigned to a variable or sent directly to the screen at the current cursor location.
Label	Provides a marker to which the **Goto** statement can direct macro execution.
Goto	Add a “**Goto**” control statement to change the currently executing line of the script to “**Label**.”
Compare	Provides the ability to compare existing variables to each other, or to compare constant values and then select a "*Goto*" branch based on an "*equals*" comparison or a "*not equal*" value.
Up/Down	Use to organize the statements into desired command sequence.
Add	Adds the command selected after the current line in the macro.
Replace	Highlight a statement and replace one statement with another.
Delete	Highlight a statement and delete it from the macro.
OK	Save and exit the command configuration.
Cancel	Cancel changes to the command configuration.

4. Click **OK** when you are finished.

   To play a key command use the mapped key or key sequence.

Wait

Wait provides several formats that allow executing WebConnect Macros to wait on synchronized states or specific text messages. The following section discusses those formats.

Cursor

Allows you to pause macro execution until the emulation cursor is at the defined row/column location. The default time-out value of zero (0) waits for an unlimited time.

By default, the wait starts immediately upon executing the line in the script. If the **After next AID key** box is checked the operation does not take effect until after the next AID key has been processed by the emulation.

Wait Text

The Wait Text statement operates in one of two ways determined by the **After next AID key** check box. Having the **After next AID key** checked (enabled) provides backward compatibility with older wait text macros or named maps.

In either case the only *required* parameter is *text* in the **Wait For Text** dialog box. See ”After next AID key Disabled (Default)” on page 263 and ”Editing macros built prior to WebConnect 6.3” on page 264 for details about the two modes of operation.

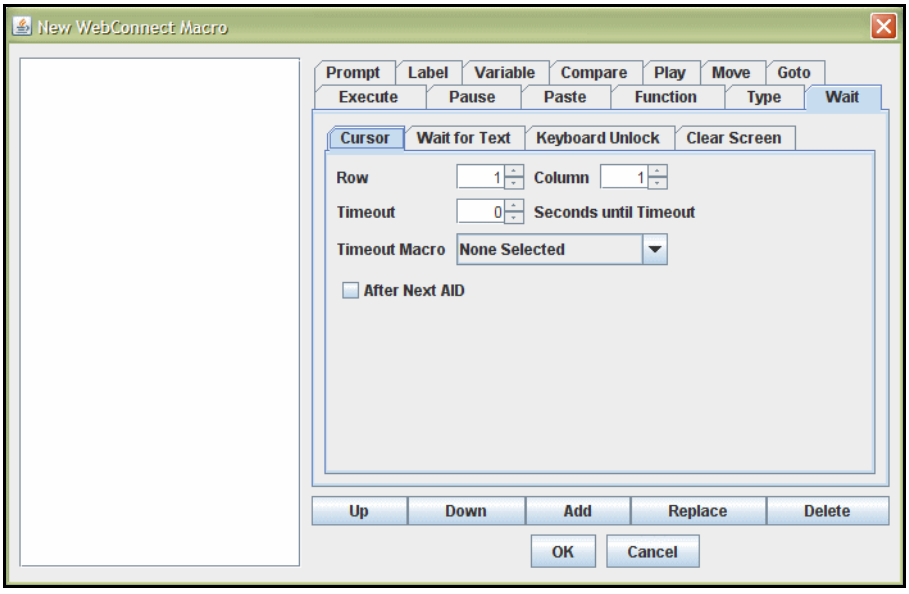


Figure 18-157: Wait Tab

After next AID key Disabled (Default)

Executes the macro until the time-out value (optional) has elapsed or text is matched on current host screen.

Table 18-29: Wait Options—After next AID key Disabled (Sheet 1 of 2)

Option	Availability	Description
Wait For Text:	Required	Alphanumeric string
Ignore Case:	Unavailable	

Table 18-29: Wait Options—After next AID key Disabled (Sheet 2 of 2)

Option	Availability	Description
At Row/Column:	Optional	Enable row and column designation in Row and Column below
Until End Of Screen:	Unavailable	
Row:	Available if At Row/Column is checked.	Available if At Row/Column is checked. Specify exact row where text string is to begin.
Column:	Available if At Row/Column is checked.	Available if At Row/Column is checked. Specify exact column where text string is to begin.
Second(s) Until Timeout	Optional	Time in seconds until the wait is stopped
Timeout Macro:	Optional	The timeout condition can be used to trigger a Timeout Macro. Invoking the Timeout macro effectively ends the current macro.
After next AID Key:	UNCHECKED	Disabled (default)
Proceed Goto:	Unavailable	
Timeout Goto:	Unavailable	

Editing macros built prior to WebConnect 6.3

After next AID key Enabled

Executes the macro *when* text matches that in the **Wait For Text** dialog box on *any* of the emulation screens *as they occur* until the time-out value has elapse if set.

Allows the macro to continue processing subsequent macro statements. AID (Attention Identifier) Keys from the macro may navigate to new host screens.

If you do not set either label, the macro execution resumes on the next macro statement after matching text or a time-out has expired.

Table 18-30 describes the options available with After next AID key enabled.

Table 18-30: Wait Options—After next AID key Enabled (Sheet 1 of 2)

Options	Availability	Descriptions
Wait For Text:	Required	Alphanumeric string
Ignore Case:	Optional	Ignore case in Wait For Text
At Row/Column:	Optional	Enable row and column designation in Row and Column below.

Table 18-30: Wait Options—After next AID key Enabled (Sheet 2 of 2)

Options	Availability	Descriptions
Until End Of Screen:	Conditional	Available if At Row/Column is enabled
Row:	Conditional	Available if At Row/Column is checked. Specify exact row where text string is to begin.
Column:	Conditional	Available if At Row/Column is checked. Specify exact column where text string is to begin.
Second(s) Until Timeout	Optional	Time in seconds until the wait is stopped
Timeout Macro:	Unavailable	
After next AID Key:	CHECKED	Enabled
Proceed Goto:	Optional	If the wait text cannot be found, Goto statement label.
Timeout Goto:	Optional	If the macro times-out before the text is found, Goto statement label.

Keyboard Unlock

The macro execution pauses until the keyboard unlock command is received. You can configure the wait to only apply after the emulation parses the next AID key. This command is mainly used for synchronization purposes.

Clear Screen

The macro execution pauses until the clear screen command is received. You can configure the wait to only apply after the emulation parses the next AID key. This command is mainly used for synchronization purposes.

WebConnect Macros

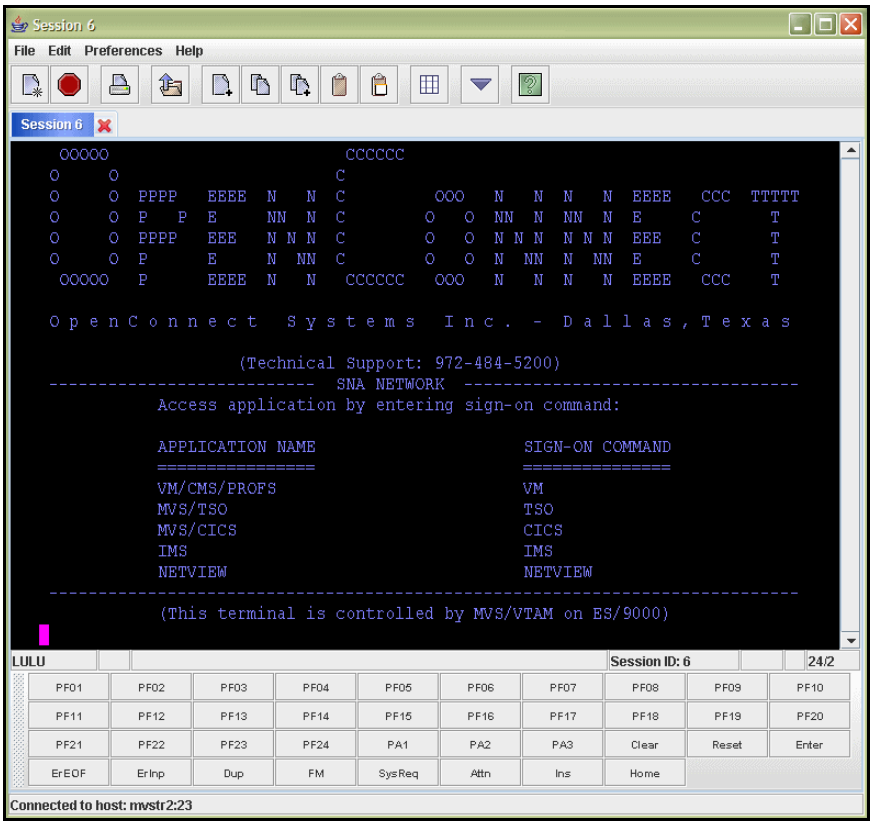


Figure 18-158: 3270 Session

Suppose, for example, you want to login to CICS from a current 3270 session. This would require the following steps.

1. Type **CICS** and press **Enter**.
2. Enter your **User ID** and **Password**.
3. Press **Enter**.

Instead, you can create a WebConnect Macro to represent the command sequence. By automating the required logon procedures, you save time by entering a key command or macro to complete the steps.

Create a WebConnect Macro

1. Select (click) a session (3270, 5250, or VT) from the SESSION panel. See Figure 18-152, on page 258.

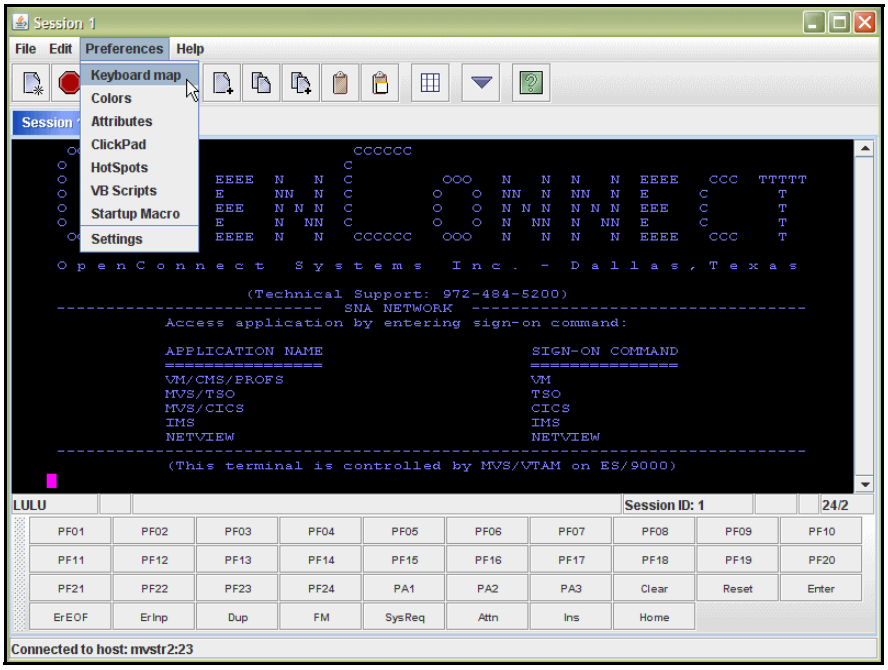


Figure 18-159: WebConnect Macro Menu

2. From the emulation session, select **Preferences>Keyboard Maps**.

   The Key Macro panel appears.

   The **Key Map Configuration** window displays a Key Commands tab (default) and a WebConnect Macro tab. Select the one you intend to create for this session, see ”Key Commands” on page 260, or ”Create a New WebConnect Macro” on page 268.

   Click the **WebConnect Macro** tab.

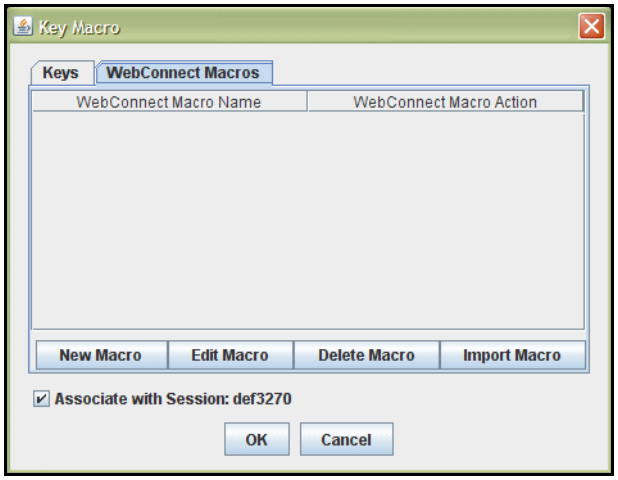


Figure 18-160: WebConnect Macros Tab

Create a New WebConnect Macro

1. Click **New Macro** from the **WebConnect Macro** tab from any session type.

   The New Macro Name dialog box appears.

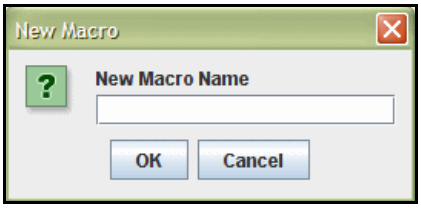


Figure 18-161: Name New Macro

2. Enter a new macro **Name** and click **OK**.

   The Macro Definition panel appears with the macro name.

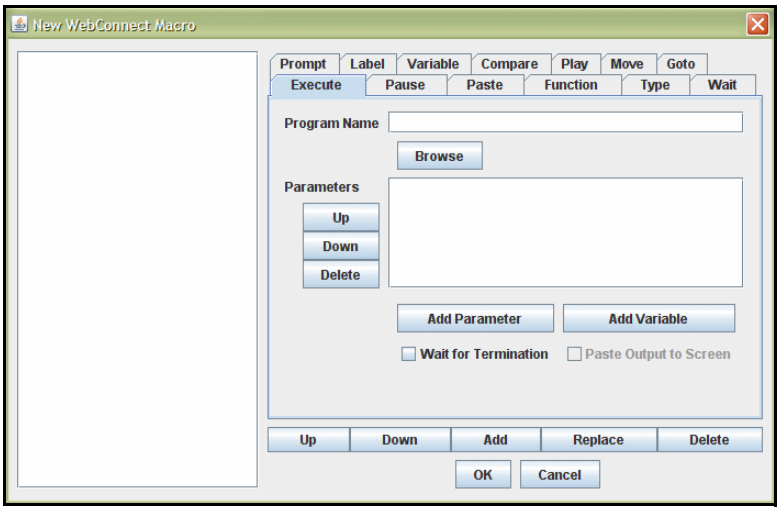


Figure 18-162: Define Macro Action

3. Select tabs and commands to add to the WebConnect Macro.

Note: You can add multiple commands to a key command or WebConnect Macro. For command menu definitions see Table 18-28 on page 261.

4. Click **Add** after each change to the macro configuration.

5. Click **OK** when you are finished.

6. To play the macro, select **Play Macro** from the **File>Macro Rec/Play>Play Macro** emulation session **Menu**.

Import WebConnect Macro

You can import a macro from any of the type session selected (3270, 5250, or VT).

1. Select the **WebConnect Macros** tab from any session macro editor.

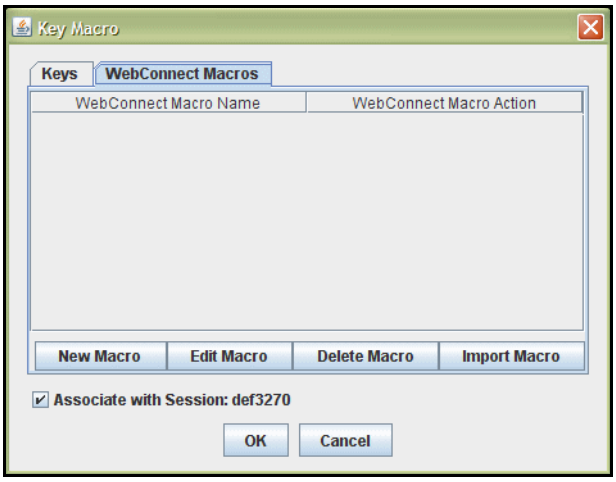


Figure 18-163: Import Macro

2. Select **Import Macro** from the **WebConnect Macro** tab.
3. Click **Import Macro**.

   The File Browser window appears.

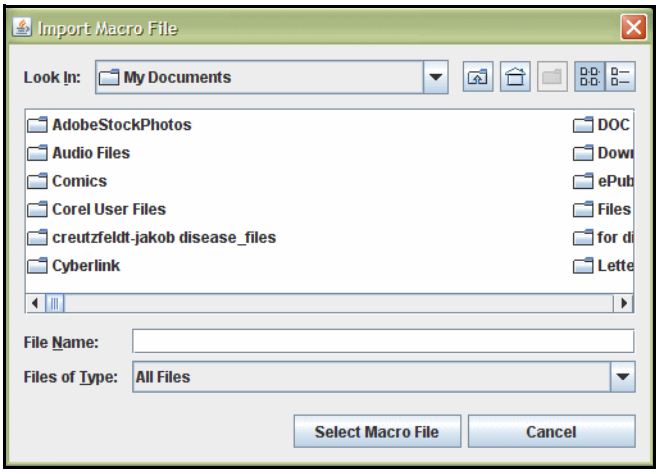


Figure 18-164: Import Macro

4. Select a macro file and click **Open** on the browser dialog.

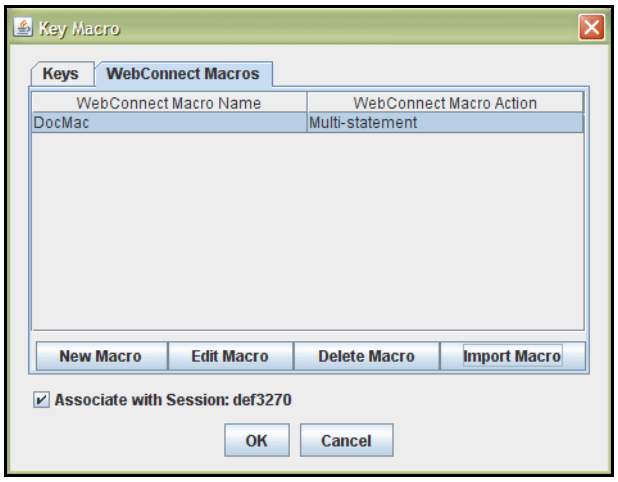


Figure 18-165: Imported Macro

The imported macro name displays in the “Key Map Configuration.”

5. You can use or edit the macro as you normally would. See Table 18-28 on page 261, and ”Create a New WebConnect Macro” on page 268“ for macro editor definitions.

Note: Unsupported macro commands are converted to **Pause** commands with the message field indicating the unsupported command. The following Rumba macro commands are currently unsupported:

- Connect
- Disconnect run Application File Transfer receive
- File Transfer Send
- Compare values-except Goto (Label), which is supported
- Copy From
- Paste To

6. Click **Apply** after each change you make.
7. Click **OK** when you are finished.
8. To play the macro, select **Play Macro** from the **File>Macro Rec/Play>Play Macro** emulation session Menu.

VB Scripts

All VB Scripts must be saved to the desktops where they are required to run, otherwise the scripts do not run. Alternatively, the administrator may create a shared drive common to all desktops and configure session parameters to run the VB Script from the central location.

1. Click **New Macro** from the **WebConnect Macro** tab from any session type. See Figure 18-166, on page 272.

   Click **New**.

2. The **Key Map Configuration** window displays. Select the **VB Scripts** tab.

Note: If the VB Scripts Tab does not appear in the dialog box, you may not have EHLLAPI enabled from the applet. From a client emulation applet ensure that Setting>EHLLAPI is set. Exit and restart the Key Map configuration dialog. See also ”3270, 5250, and VT Client Emulation Features” on page 50.

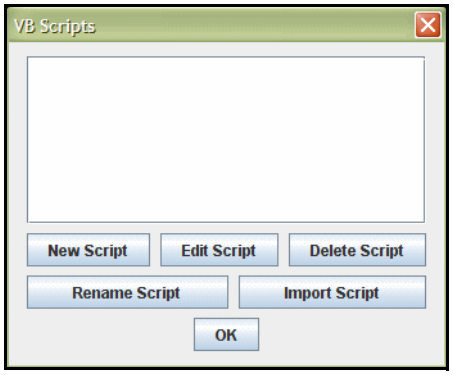


Figure 18-166: VB Scripts Tab

Creating a New VB Script

To create a new VB Script complete the following steps:

1. Click **New VB Script**. The script name dialog box appears as shown in Figure 18-167.

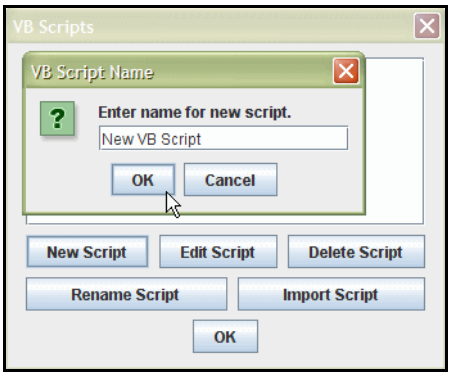


Figure 18-167: New VB Script Name

2. Enter a new **VB Script Name** and click **OK**. The new VB Script name now appears in the script list as shown in Figure 18-168, on page 273.

Note: All VB Scripts must be manually copied to a shared drive common to the target desktops, otherwise the scripts do not run.

To edit the VB Script see ”Editing a VB Script” on page 274.

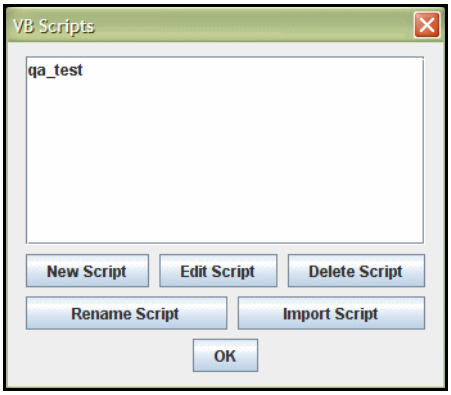


Figure 18-168: New VB Script

Import VB Script

You can import an Extra VB Script into the WebConnect VB Script Editor from any 3270 or 5250 session types you select.

1. Select the **VB Script** tab from any session macro editor. See Figure 18-166.
2. Click **Import VB Script**.
3. A File Browser window opens the **Select VB Script to Import** dialog box where you can select an existing VB Script file.
4. Select an Extra BASIC macro file (*.EBM) and click **Open**.

   The selected macro file is converted to the WebConnect VB Script file format and the file name appears in the script list as shown in Figure 18-168.
5. You can use or edit the script as you normally would.

Editing a VB Script

To edit a VB Script complete the following steps:

1. Click **Edit VB Script**.
2. The WebConnect Script Editor appears in a separate window as shown in Figure 18-169 below. See the *WebConnect Script Editor User Guide* and the *WebConnect Script Language Reference Guide for more information about editing VB Scripts.*

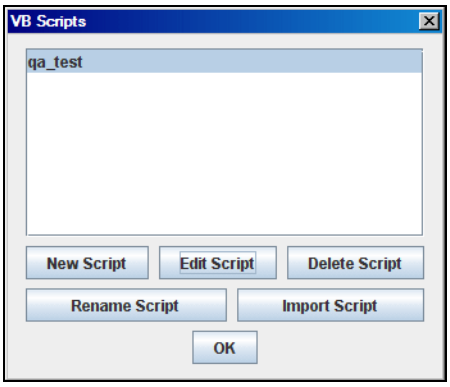


Figure 18-169: WebConnect Script Editor

Remove a VB Script

To remove a VB Script complete the following steps:

1. Select the script you want to remove from the list in the Key Map Configuration window. See Figure 18-168, on page 273.
2. Click **Remove VB Script**.

   The Delete VB Script Confirmation dialog box appears.
3. Click **Yes**.
4. Click **OK** or **Apply**.

User Macro Autostart

The User Macro Autostart feature enables users to assign *User Defined Startup Macros* to specific session numbers and save them in their user preference settings. This feature requires no administrator intervention, providing users direct control over their startup macro configuration.

When using the User Macro Autostart feature keep in mind the following:

- Each session type maintains its own session number list except when Cached Applets or the Controller Applet is used. In those cases, every session, type (3270, 5250, VT) use the same session number list. For more information about the Controller see ”Controller Applet” on page 48.
- Session level startup macros take precedence over user autostart macros and start first.
- Macro operation is exactly the same as if it were invoked through **File-Macro Rec/Play-Play Macro** menu option.

There are three modes of operation:

1. **Default Macro set only**—Each time the particular session icon is clicked the default macro is run. No session number association is required.

2. **Default Macro set to *None* with macros assigned in the Startup Macro List**—The first time the session icon is clicked the macro assigned to Session Number 1 runs. The second time the session icon is clicked, the macro assigned to Session Number 2 runs and so on.

3. **Default Macro set and macros assigned in the Startup Macro List**—The first time the session icon is clicked the macro assigned to Session Number 1 runs. The second time the session icon is

clicked, the macro assigned to Session Number 2 runs and so forth. Subsequent unassigned sessions run the default macro.

Note: When a session is terminated, the Session Number assigned to it on the **Startup Macro List** is left open. The next time that session type's icon is clicked, the first open Session Number is assigned to the new session and the corresponding macro assigned to that Session Number is started.

For example: A user assigns startup macros to four Session Numbers and starts those sessions. Later, the session assigned to Session Number 3 is lost for whatever reason. When the user clicks that session icon again, the resulting session is assigned to the open Session Number 3. If the user clicks the session icon once more, making a total of five sessions, the fifth session starts according to the Default Macro setting since a fifth session had not been assigned to a macro on the Startup Macro List.

Assigning Autostart Macros

To setup Macro Autostart complete the following steps:

1. Click **Preference>Startup Macro**. See Figure 18-171, on page 277.

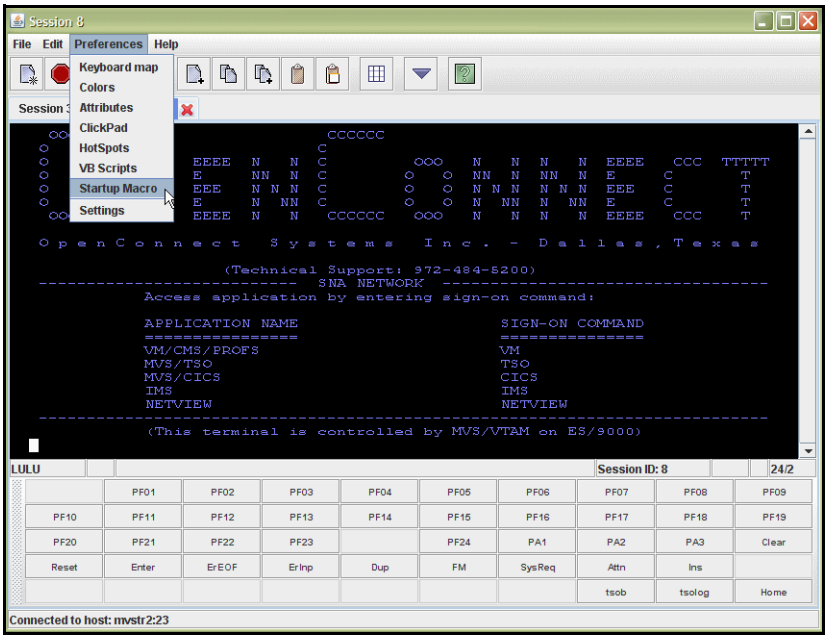


Figure 18-170: User Autostart Macros

The **Macro Operations** panel appears as shown in Figure 18-171, on page 277.

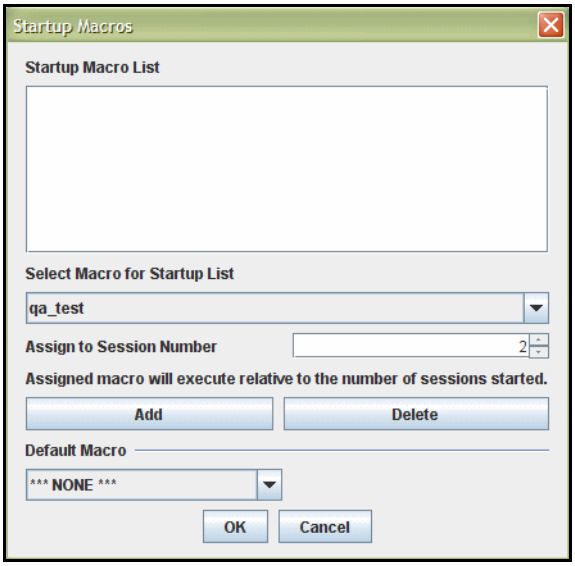


Figure 18-171: User Macro Autostart

Default Macro

2. Select a macro from the **Select Default Macro** list as the default startup macro for the current session type or leave it set to the default, **None**.

> **Note:** Only keystroke macros for the *current* Session type are available along with Complex Macros. BASIC macros as are available for 3270 and 5250 sessions.

Startup Macro List

3. Enter the subsequent session number (1-99), if any, you want to assign a startup macro to in the **Assign To Session Number** field.
4. Select a macro from the pull-down **Select Macro For Startup List** and click **Add**.

   The selected macro appears in the **Startup Macro List**.
5. Repeat Steps 3 and 4 for additional sessions making sure to enter unique session numbers in the **Assign To Session Number** field for each macro.
6. Click **OK**.

Unassigning Startup Macros

To unassign and disassociate a macro from a session complete the following steps:

1. Click **Edit>Preference>Startup macro**.

   The **Macro Operations** panel appears as shown in Figure 18-171, on page 277.
2. Select **None** from the **Select Default Macro** list. Click **OK**.
3. Select the macro in the **Startup Macro List** that you wish to unassign, if any and click **Delete**.
4. Click **OK**.

19 HTML Client Emulation

From the SESSION panel you can access all pre-configured sessions, user-configurable preferences, settings, and other components described below, only if they are implemented by your System Administrator.

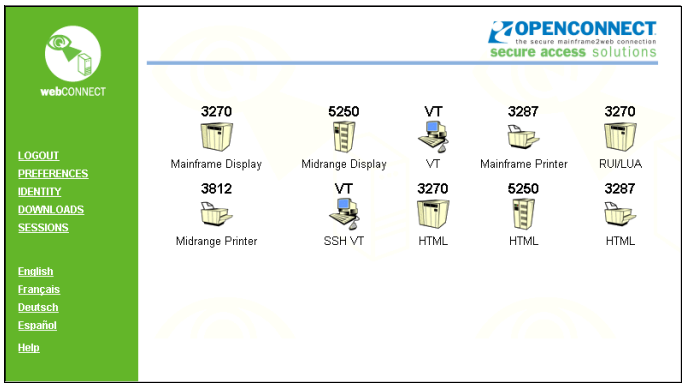


Figure 19-172: SESSION panel

Select a 3270, 5250, or 3287 HTML Client. The session displays a HTML client window as in Figure 19-173, Figure 19-174, and Figure 19-175.

3270 HTML Client

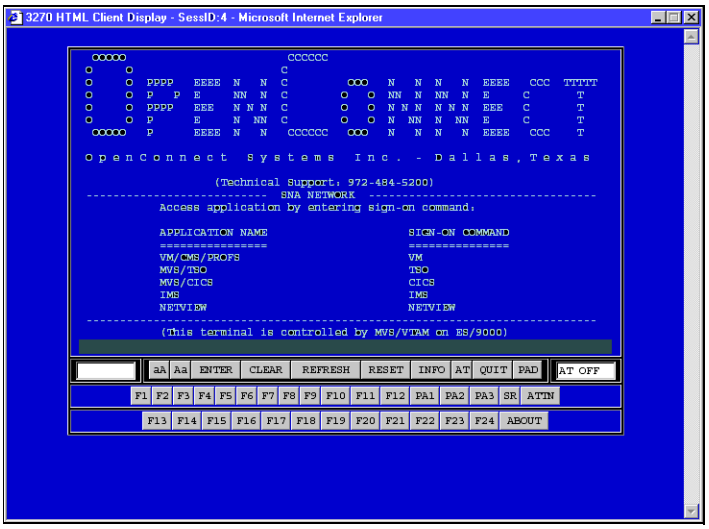


Figure 19-173: 3270 HTML Client

HTML client windows have a fixed, always-present, clickpad at the bottom of the window. The *expanded keypad*, rows two, and three, are displayed in these examples.

To expand and use rows two and three, click **PAD** in the first row. See Table 19-32 on page 284 and Table 19-33 on page 285 for corresponding Key function.

> **Note:** Depending on your default browser, HTML windows may appear slightly different from these examples.

5250 HTML Client

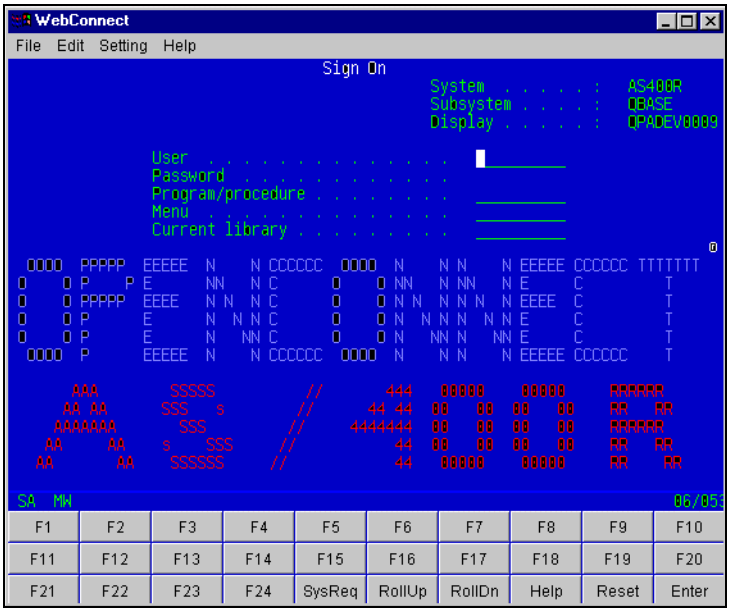

WebConnect
File Edit Setting Help
Sign On
System . . . . . : AS400R
Subsystem . . . . : QBASE
Display . . . . . : QPADEV0009
User . . . . . .
Password . . . . . .
Program/procedure . . . . . .
Menu . . . . . .
Current library . . . . . .
SA MW
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10
F11 F12 F13 F14 F15 F16 F17 F18 F19 F20
F21 F22 F23 F24 SysReq RollUp RollDn Help Reset Enter

Figure 19-174: 5250 HTML Client

Note: The browser *POSTs* the current HTML page back to the WebConnect server when you use the clickpad. Be sure to complete all data entry *before* using the clickpad to avoid posting incomplete information to the server. See Table 19-32 on page 284 and Table 19-33 on page 285 for key functions.

3287 HTML Client

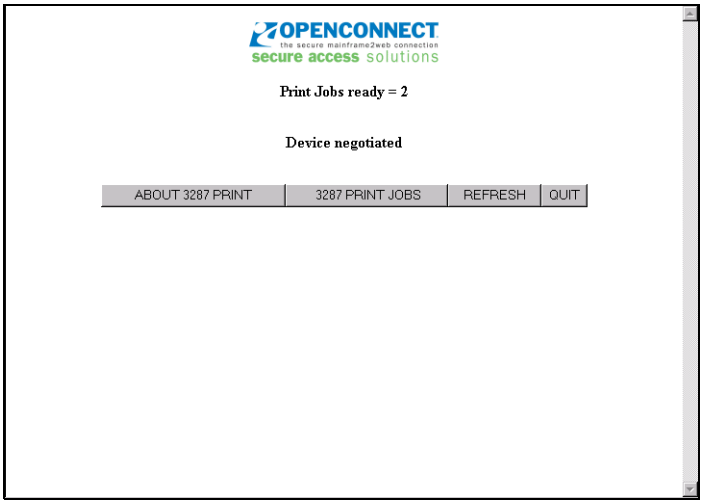


Figure 19-175: 3287 HTML Print

For information about 3287 HTML Print, see ”3287 Print to HTML Client” on page 286.

Input Field Validation

WebConnect HTML validates field input data and generates an error message indicator in the Operator Input Area (OIA) if you type incorrect characters.

In this event, the current text field is highlighted in red to show which character is incorrect, and an error message indicator displays in the lower left hand section of the window, see the following Table 19-31.

> ***Example***: If you are typing the number 74006 and accidentally type alpha zeros instead of numeric and press **Enter**, the error message Num Only appears and `74oo6` displays in the input field to indicate the wrong keys were typed. The cursor automatically returns to the incorrect field, highlighted in red, and you are not able to continue until the error is resolved. Incorrect data type entry is not accepted or posted.

Table 19-31: OIA Input Field Validation Symbols

Symbol	Description
Num Only=	Numeric only field. Please reenter data.
-Num Only=	Signed Numeric only field. Please reenter data.
No Room=	Signed Numeric only field, no room for minus sign. Please reenter data.
Alpha Only=	Alpha only field. Please reenter data.

3270 Input

3270 requires *alphanumeric* keystrokes, all numbers and alpha characters, both upper or lower case, are accepted.

5250 Input

5250 requires *alpha* only or *numeric* only field entries. *Signed numeric* and *Mono case* fields are also supported.

HTML Color Scheme

WebConnect offers a color scheme setting for browser and emulation window changes. This feature addresses the incompatibility with some operating system browsers that do not display HTML sessions clearly because of the background or text color. For example, a session window may be difficult to read if a browser window is black with green text and a HTML emulation session window is black with green text. The administrator can change it to enhance the color scheme, making highlighted fields and text input easier to read.

HTML ClickPad Functions

Table 19-32: HTML Client ClickPad Functions

	Button	Functions
Local*	REFRESH	Refreshes the current HTML page. When using HTML and browser to represent a HOST screen, WebConnect has only one chance to respond to the most recent POST command. However, due to the nature of 3270 and 5250 emulation an entire screen update may arrive in multiple write commands, and the Pro server may not be able to send all the data at one time. This button is used to basically re-paint the most recent screen and pick up any additional screen changes made since the last POST command.
	INFO	Displays clickpad help.
	AT	Auto Tab local feature. If Auto Tab is ON while typing in a data field, the cursor automatically moves to the next logical field. If Auto Tab is OFF, Auto Tab or Auto Skip is disabled and you must manually move (Tab) to next field.
	QUIT	Quit terminates the current 3270/5250-session and send a message “Host Connection Terminated.” The actual window stays on the screen so that a user can view the WebConnect message.
	PAD	The click-pad toggle button used to display or hide the 2nd and 3rd row of buttons.

Table 19-32: HTML Client ClickPad Functions (Continued)

	Button	Functions
Emulation*	ENTER	Submit this form
	CLEAR	Clear
	ATTN	Attention
	RESET	Reset
	SR	System Request
	Help	Help key (5250 only)
	UP	Page up (5250 only)
	DOWN	Page down (5250 only)
	PRT	Host print (5250 only)
	F1-F24	PF1-PF24
	PA1-PA3	PA1-PA3 (3270 only)
*Using Local functions do not affect the server. *Emulation functions are used to send information to the host.		

HTML Keyboard Mapping

Table 19-33: HTML 3270 & 5250 Keyboard Mapping

Keymap Defaults		
F1 = PF1	SHIFT + F1 = PF13	CTRL + F1 = PA1 (3270 only)
F2 = PF2	SHIFT + F2 = PF14	CTRL + F2 = PA2 (3270 only)
F3 = PF3	SHIFT + F3 = PF15	CTRL + F3 = PA3 (3270 only)
F4 = PF4	SHIFT + F4 = PF16	CTRL + F4 = CLEAR
F5 = PF5	SHIFT + F5 = PF17	CTRL + F5 = RESET
F6 = PF6	SHIFT + F6 = PF18	CTRL + F6 =ATTN
F7 = PF7	SHIFT + F7 = PF19	CTRL + F7 = SYSTEM REQUEST
F8 = PF8	SHIFT + F8 = PF20	Page Up = Page Up (5250 only)
F9 = PF9	SHIFT + F9 = PF21	Page Down = Page Down (5250 only)
F10 = PF10	SHIFT + F10 = PF22	ENTER = SUBMIT

Table 19-33: HTML 3270 & 5250 Keyboard Mapping (Continued)

Keymap Defaults		
F11 = PF11	SHIFT + F11 = PF23	CTRL+L = Lock Backspace
F12 = PF12	SHIFT + F12 = PF24	

Note: For additional HTML client and Cascading Style Sheet information, contact your system administrator.

3287 Print to HTML Client

Unlike the applet implementation which sends print jobs directly to the printer, HTML print sessions are stored in a temporary server “spool” directory. You can then view the print sessions through a browser window and print them with the browser’s print capability. The HTML 3287 print feature is available as a standalone printer or associated printer.

HTML 3270/3287 Associated Printer Session

1. From the SESSION panel, select a **3270 HTML Client** with the **3287** associated print process enabled.

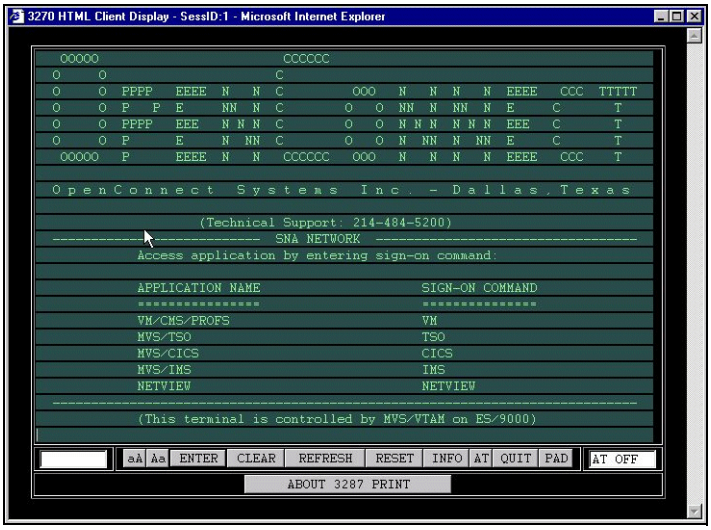


Figure 19-176: 3287 Associated Print

2. The **About 3287 Print** button indicates that the printer session has started successfully. For a list of helpful client server information, click About 3287 Print to access the following window.

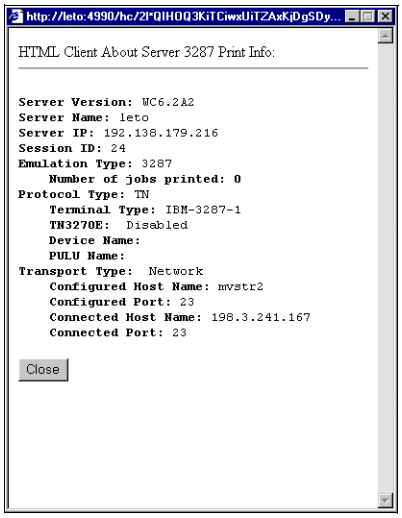


Figure 19-177: About Server 3287 Print

3. Click **Close** to return to the client session window.

4. After you have submitted jobs to the associated printer and the emulation panel has been refreshed, a second **3287 Print Jobs** button will display to indicate that print jobs are complete.

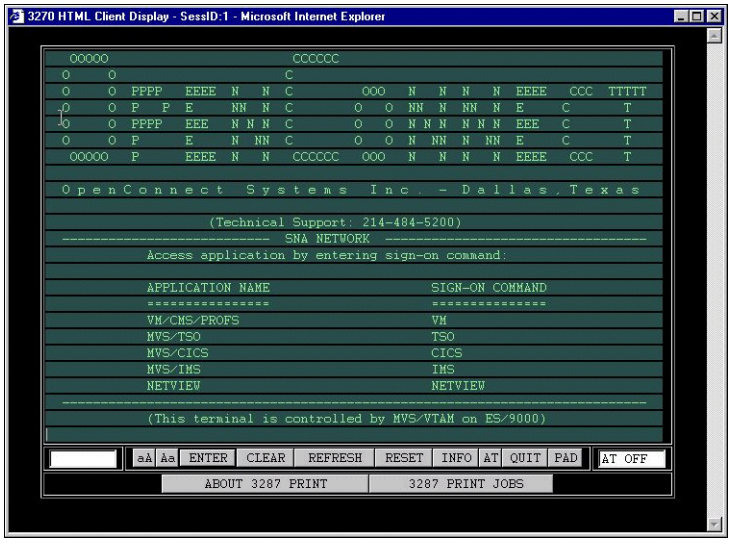


Figure 19-178: 3287 Associated Print Jobs

5. Click **3287 Print Jobs** to view a print jobs list.

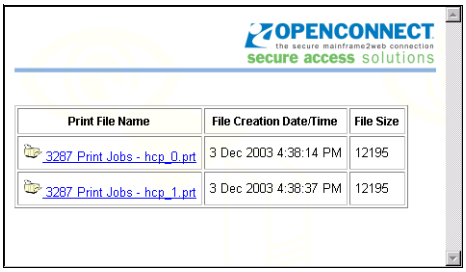


Figure 19-179: 3287 Print Jobs

A list of completed print jobs for each session will display in the browser window. The print job names will be the same, except for different print job number extensions.

6. Select (click) a print job name and the file content will display in the browser window.

7. You can use the browser printer capabilities to print the file.

   Print jobs associated with the current session will be deleted when the session is terminated.

3812 Print Session

You can use a 3812 print session to print an AS/400 based print job on the local or network printer. From the browser, select one of the 3812 print sessions that has been configured.

To start a 3812 print session:

1. Select the desired 3812 Print Session from the SESSION panel.

   The 3812 print session window will display.

2. If the connection fails, attempt to resolve the problem indicated by the error message. If the problem persists, try a different 3812 print session.

3. Send an AS/400 print job to the print device connected to the 3812 print session. You will find the print device name (and other important information about the session) on the About Server dialog located in the 3812 print session Help menu.

20 Desktop Emulator

Desktop Emulator

The WebConnect Desktop Emulator provides an alternative to the browser-based emulator to access WebConnect sessions. It is a self-contained emulator that does not require installation of a standalone copy of the *Oracle Java Run Time*. However, it is based on the Swing Client (as described in Chapter 14 through Chapter 18) and operates in the same manner for emulation. This section described the additional features added to the Swing Client to support standalone operation.

Starting the Desktop Emulator

The Desktop Emulator is installed as a standard Windows application and is started in the same manner. A **WebConnect Desktop Emulator** program group is added to the Start menu. Inside of that group are two entries:

- WebConnect Desktop Emulator
- WebConnect Desktop Emulator (Console)

Both entries start the Desktop Emulator. The **WebConnect Desktop Emulator (Console)** also opens a Windows console window to display debugging output and other information similar to the Java Console with the browser-based clients.

Execution of the installer requires Administration privileges. Normal usage of the Desktop Emulator, including automatic version updates, requires only standard user permissions.

Sessions Tab

Initially, the Desktop Emulator displays a *Sessions Tab* similar in appearance to the default user interface for browser-based users. Unlike emulation tabs within the Swing client, this tab cannot be closed. Depending on the configuration of the WebConnect user, the tab may display all available session icons, a unique list defined for that user, or folders containing selected session icons. Generally, the

user sees the same display of sessions when using the browser-based default user interface or the Sessions Tab within the Desktop Emulator. The tab is titled **WebConnect Sessions** by default, but the title can be changed when the emulator is installed (or by a custom portal implementation).

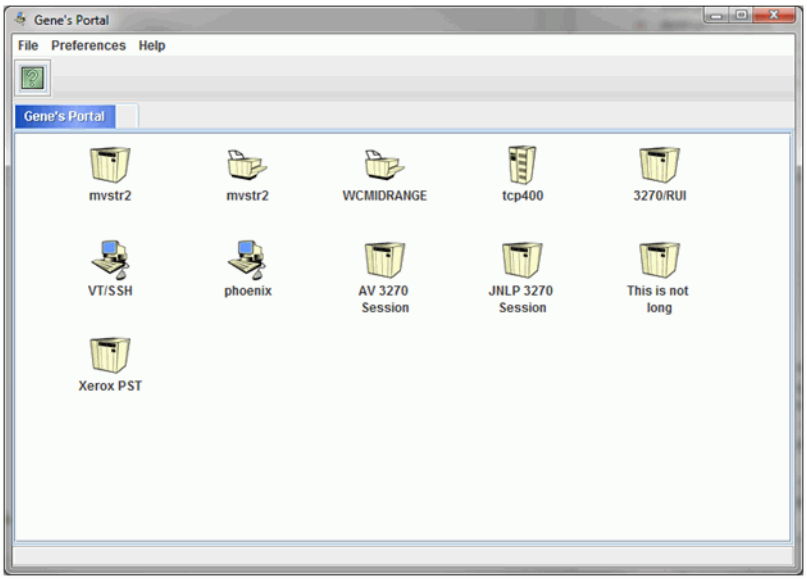


Figure 20-180: WebConnect Sessions tab

A session is started by clicking on an icon. Right-clicking an icon allows the session to be started with Single Session Tracing enabled.

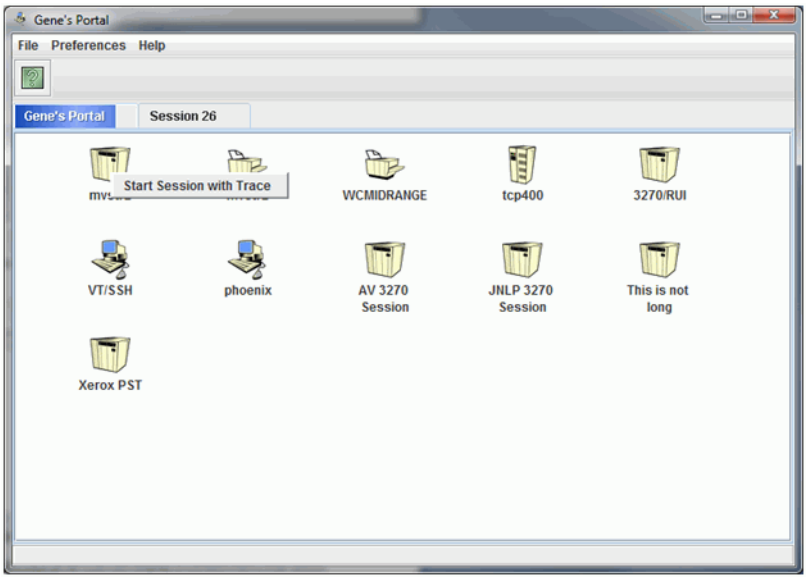


Figure 20-181: Icon context menu

A right-click within the tab space around an icon displays a context menu allowing the Session Tab to be *refreshed* by reloading the icons from the portal.

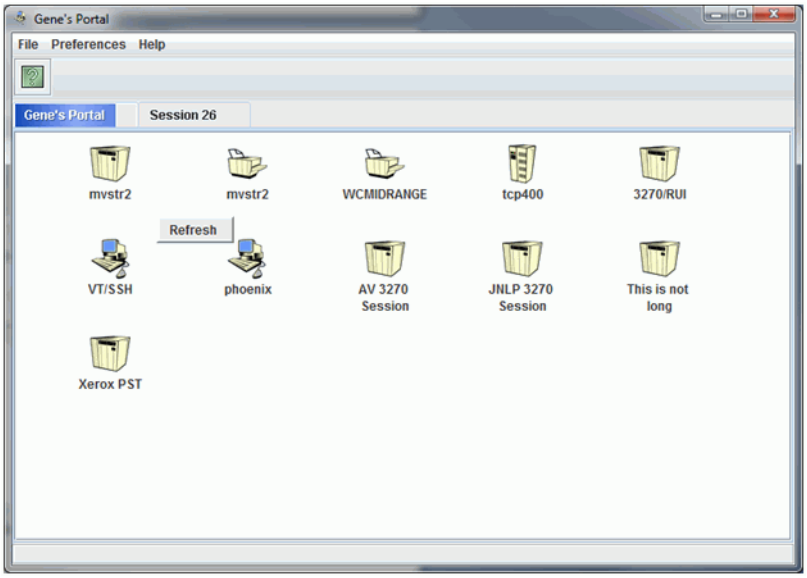


Figure 20-182: Tab space context menu

Authentication

Although the Desktop Emulator is a stand-alone Windows application, it still communicates with the WebConnect user interface to obtain the list of sessions as well as necessary parameters when starting a session. These communications are via a HTTP web portal. A standard portal is included in the WebConnect Server. Customers may also choose to implement a custom portal. Depending on the choices made by the WebConnect Administrator when deploying WebConnect, it may be necessary to authenticate before displaying the Sessions Tab. Additionally, if a client HTTP Proxy is in use, authentication to the HTTP Proxy may be required.

Basic Authentication

If the portal is configured for Basic Authentication, that are User IDs and Passwords, the Desktop Emulator prompts for the credentials before displaying the main window with the Sessions Tab.

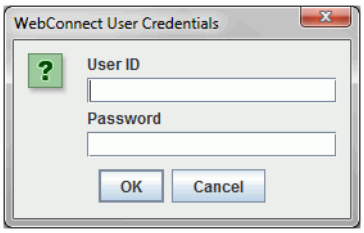


Figure 20-183: WebConnect User Credentials

If incorrect credentials are entered, the dialog is redisplayed. If Cancel is chosen, the main window displays with an empty Sessions Tab. Without proper credentials, the only useful options are to exit the emulator at this time or to refresh the Sessions Tab and provide the proper credentials.

For security reasons, this information is not cached from one execution of the Desktop Emulator to another.

Portal Form Authentication

If the WebConnect server is configured for *Token Authentication* or a custom portal with forms-based authentication is in use, access to a browser page to obtain the necessary authentication cookies is still required. In these situations, the Desktop Emulator opens a restricted browser within a window. The browser is loaded with the portal authentication page specified within the HTTP response to the Desktop Emulator. When the authentication process has been successfully completed, the browser window automatically closes and the main window with the Sessions Tab is displayed. If the user closes the browser window before completing the portal login, the result is the same as if clicking **Cancel** on the Basic Authentication dialog.

Proxy Authentication

If Windows is configured to use a client-side HTTP proxy, the Desktop Emulator will use that proxy automatically. If the proxy requires authentication, the Desktop Emulator prompts for the proxy credentials. This prompt is separate from any Basic Authentication prompts that may be required.

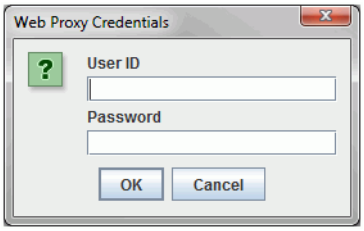


Figure 20-184: Web Proxy Credentials

For security reasons, this information is not cached from one execution of the Desktop Emulator to another.

If a client-side HTTP proxy is combined with Portal Form authentication, the browser window may prompt for the proxy credentials separate from the Desktop Application, leading to two prompts. This is the result of using a standard Microsoft browser component for the Forms authentication. It is not possible to pass the proxy credentials from the Desktop Application into this browser component, leading possibly to two prompts. The Microsoft component caches that credential so the double prompting is not likely each time the Desktop Emulator is started.

Updates

When the Desktop Emulator starts, it checks the portal to determine the proper version of the emulation engine to use. When this version does not match the current version for the user, the new version is automatically downloaded and the Desktop Emulator restarted to use the new version.

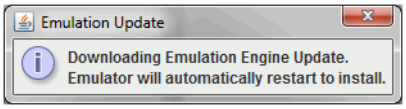


Figure 20-185: Emulation Update

Glossary

3270 emulation

Imitation of an IBM 3270 computer terminal on a terminal connected to a TCP/IP computer so that the imitating system accepts the same data, executes the same computer programs, and achieves the same results as the imitated IBM terminal.

3270 session

The name of a session when the TCP/IP computer is communicating with the host computer through the SNA3270 Presentation Services or 3270 TELNET Server.

3287 emulation

Imitation of an IBM 3287 printer terminal connected to a TCP/IP computer so that the imitating system accepts the same data, executes the same commands, and achieves the same results as the imitated printer.

3287 session

The name of a print session when the TCP/IP computer is communicating with the host computer through the SNA3270 Presentation Services or 3270 TELNET Server.

3812 emulation

Imitation of an IBM 3812 computer terminal on a terminal connected to a TCP/IP computer so that the imitating system accepts the same data, executes the same programs, and achieves the same results as the imitated IBM terminal.

3812 session

The name of a print session when the TCP/IP computer is communicating with the host computer through the SNA3270 Presentation Services.

5250 emulation

Imitation of an IBM 5250 computer terminal on a terminal connected to a TCP/IP computer so that the imitating system accepts the same data, executes the same programs, and achieves the same results as the imitated IBM terminal.

5250 session

The name of a session when the TCP/IP computer is communicating with the host computer through its Presentation Services.

API (Application Program Interface)

A language and message format used by an application program to communicate with the operating system or other system program such as a database management system (DBMS). APIs are implemented by writing function calls in the program, which provide the linkage to a specific subroutine for execution. Thus, an API implies that some program module or routine is either already in place or must be linked in to perform the tasks requested by the function call.

APPC

Short for ***Advanced Program-to-Program Communications***. Also known as LU 6.2 and based on IBM's SNA, APPC is a communication protocol that transaction programs in a distributed computing environment can use to talk to each other.

Applet

A small Java program that can be embedded in an HTML page. Applets differ from full-fledged Java applications in that they are not allowed to access certain resources on the local computer, such as files and serial devices (modems, printers, etc.), and are prohibited from communicating with most other computers across a network. The current rule is that an applet can only make an Internet connection to the computer from which the applet was sent.

ASCII

American Standard Code for Information Interchange. A standard coded character set, consisting of 7-bit coded characters (8 bits including a parity check bit), used for information exchange among most non-IBM data processing systems, data communication systems, and associated equipment. The basic-ASCII character set contains English language characters.

Attribute Byte

The byte used to establish the characteristics of the field that follows it, for example, a byte that indicates the following field is blinking, highlighted, or unprotected.

Browser

The program that serves as the front end to the World Wide Web on the Internet. To view a site, type its address (URL) into the browser's Location field. Type `www.computerlanguage.com`, for example, and the home page of that site is downloaded to your browser. The home page is an index to other pages on that site that you can jump to by clicking a Click here message or an icon. Links on that site may take you to other related sites.

Byte

A sequence of eight adjacent binary digits that are operated upon as a unit and that constitute the smallest addressable unit in the system.

CSS

Short for Cascading Style Sheets, a new feature added to HTML that gives both administrators and users more control over how pages are displayed. With CSS, designers and users can create style sheets that define how different elements, such as headers and links, appear. These style sheets can then be applied to any Web page. The term cascading derives from the fact that multiple style sheets can be applied to the same Web page. CSS was developed by the World Wide Web Consortium (W3C).

Certificate

The digital equivalent of an ID card. A certificate specifies the name of an individual, company, or other entity and certifies that a public key, which is included in the certificate, belongs to that entity. A certificate's validity can be verified by checking the CA's digital signature. Also called digital ID, digital passport, public-key certificate, X.509 certificate, and security certificate.

Certificate Authority (CA)

An organization that issues digital certificates (digital IDs) and makes its' public key widely available to the intended audience. A certificate is only issued after verifying the identity of the person or entity the certificate is intended to identify. A CA also renews and revokes certificates and generates a list of revoked certificates at regular intervals.

Certificate Fingerprint

A unique number associated with a certificate. The number is not part of the certificate itself but is produced by applying a mathematical function to the contents of the certificate. If the contents of the certificate change, even by a single character, the function produces a different number. Certificate fingerprints can therefore be used to verify that certificates have not been tampered with.

CGI (Common Gateway Interface)

A set of rules that describe how a Web server communicates with another piece of software on the same machine, and how the other piece of software (the “CGI program”) talks to the Web server. Any piece of software can be a CGI program if it handles input and output according to the CGI standard. Usually a CGI program is a small program that takes data from a Web server and does something with it, like putting the content of a form into an email message, or turning the data into a database query. You can often tell that a CGI program is being used by observing CGI-bin in a URL.

CGI-bin

The most common name of a directory on a Web server in which CGI programs are stored. The bin part of CGI-bin is a shorthand version of binary, because executable versions of programs are sometimes called binaries. In real life, most programs found in CGI-bin directories are text files—scripts executed by binaries located elsewhere on the same machine.

Client

In the TCP/IP network environment, a process that employs (or consumes) resources provided by a server. Client is initiated by the user when issuing a networking command. The client process sends a request for service to a server process on the remote host. If the request is honored, a connection is established between the local client and the remote server processes.

Code page

A table that defines a coded character set by assignment of a character meaning to each code point in the table for a language or a country.

Configurator

The WebConnect automated, menu-driven utility used for customizing configuration files for the WebConnect server.

Configuration

(1) The arrangement of a computer system or network as defined by the nature, number, and the chief characteristics of its functional units. (2) The devices and programs that make up a system, subsystem, or network.

Daemon

A program running all the time on a UNIX system.

Digital Certificate

The digital equivalent to an ID card in the RSA public key encryption system. Also called digital IDs, digital certificates are issued by certification organizations after verifying that a public key belongs to a certain owner. The certification process varies depending on the certification authority (CA) that issues the certificates and the level of certification.

Domain Name

The unique name that identifies an Internet site. Domain Names always have two or more parts separated by a dot. The part on the left is the most specific, and the part on the right is the most general. A given machine can have more than one Domain Name, but a given Domain Name points to only one machine.

E-mail (Electronic Mail)

Messages, usually text, sent from one person to another via computer. E-mail can also be sent automatically to a large number of addresses (mailing list).

EBCDIC

Extended Binary Coded Decimal Interchange Code. A standard mainframe coded character set, consisting of 8-bit coded characters, used for information exchange among most IBM mainframe systems, data communications systems, and associated equipment.

Emulation

The imitation of all or part of one system by another so the imitating system accepts the same data, executes the same programs, and achieves the same results as the imitated computer system.

Extranet

Business-to-business communications. A network that allows an organization’s partners and suppliers to interact with corporate information and applications. This communication is typically done via a public or private switched network or virtual private network, VPN.

Firewall

A combination of hardware and software that separates a LAN into two or more parts for security purposes.

FTP (File Transfer Protocol)

A common method of moving files between two Internet sites. FTP is a special way to log in to another Internet site for the purpose of retrieving and/or sending files. Many Internet sites have established publicly accessible repositories of material that can be obtained using FTP by logging in with the account name anonymous; thus these sites are called anonymous FTP servers.

Gateway

(1) A functional unit that connects two computer networks or different network architectures. (2) A special purpose, dedicated computer that attaches to two or more networks and routes packets from one to the other.

Host

Any computer on a network that is a repository for services available to other computers on the network.

Host application subsystem

The program running on the host mainframe to and from which data is sent and received using the emulated station. Any VTAM application which supports 3270 display stations or printers can be accessed through the *WebConnect* server. For 3270 sessions, these host application programs include Customer Information Control System/Virtual Storage (CICS/VS), Information Management System (IMS), Time Sharing Option (TSO), and Virtual Machine/Conversational Monitor System (VM/CMS).

HTML (HyperText Markup Language)

The coding language used to create Hypertext documents for use on the World Wide Web. HTML looks a lot like old-fashioned typesetting code, where you surround a block of text with codes that indicate how it should appear. Additionally, in HTML you can specify that a block of

text, or a word, is linked to another file on the Internet. HTML files are meant to be viewed using a World Wide Web Client Program, such as Netscape or Internet Explorer.

HTTP (HyperText Transport Protocol)

The protocol for moving hypertext files across the Internet. A HTTP client program is required on one end, and a HTTP server program on the other end. HTTP is the most important protocol used in the World Wide Web (http://www).

HTTP error code 302

This error indicates to the browser that its desired resource is unavailable and provides a new location for the browser to display instead. This location will be the URL configured by the administrator. This allows any page on any web server to be displayed as the result of a user ID failure.

HTTP error code 403

This error code indicates that the requested resource is forbidden and browsers will display an error page to the user indicating the resource is forbidden.

Hypertext

Generally, any text that contains links to other documents—words or phrases in the document that can be chosen by a reader and cause another document to be retrieved and displayed.

IBM channel

In the IBM System/370 and 370/XA architecture, the processor that does all of the actual input/output (I/O) processing.

Internet (uppercase I)

The collection of independent and autonomous networks linked by gateways that use primarily the TCP/IP protocol suite and function as a single, cooperative virtual network.

internet (lowercase i)

Any connection of two or more networks—as in international or interstate.

Internet address

The 32-bit address assigned to hosts on a TCP/IP internet.

Intranet

A private network inside a company or organization that uses the same kinds of software you find on the public Internet, but that is only for internal use. As the Internet has become more popular many of the tools used on the Internet are being used in private networks, for example, many companies have Web servers that are available only to employees. Note that an Intranet may not actually be an internet—it may simply be a network.

IP Address (Internet Protocol Address)

The physical address of a computer attached to a TCP/IP network. Every client and server station must have a unique IP address. Client workstations have either a permanent address or one that is dynamically assigned for each dial-up session (see Domain Name.). IP addresses are written as four sets of numbers separated by periods; for example, 204.171.64.2.

IP (Internet Protocol)

The TCP/IP standard protocol that defines the basic unit of information passed across the Internet.

IP Routing

Protocol routing that provides a virtual connection from one TCP/IP-based LAN to another TCP/IP-based LAN through an SNA environment.

Java

A network-oriented programming language invented by Sun Microsystems that is specifically designed for writing programs that can be safely downloaded to your computer through the Internet and immediately run without fear of viruses or other harm to your computer or files.

JDK (Java Development Kit)

A software development package from Sun Microsystems that implements the basic set of tools needed to write, test and debug Java applications and applets.

JVM (Java Virtual Machine)

A Java interpreter from the JavaSoft division of Sun. It converts the Java intermediate language (byte code) into machine language one line at a time and then executes it. The Java Virtual Machine is licensed to software companies that incorporate it into their browsers and server software. Since it is used on all major platforms, Java programs run in most computers. Microsoft also calls its Java interpreter a Java Virtual Machine.

Keyboard Mapping

The process whereby the Terminal Emulator maps the IBM 3270 keys to the keyboard of the particular display station attached to the TCP/IP computer.

LU (Logical Unit)

In SNA, a port through which an end user accesses the SNA network in order to communicate with another end user and through which the end user accesses the functions provided by System Services Control Points (SSCPs).

LU type

Shortened form for LU-LU session type. In SNA, the classification of an LU-LU session in terms of the specific subset of SNA protocols and options supported by the logical units (LUs) for that session. The 3270

terminal emulator supports LUs for display stations (LU type 2) and for printers (LU types 1 and 3). The 3287 printer emulator supports LU types 1 and 3.

Plug-in

A piece of software that adds features to a larger piece of software. Common examples are plug-ins for the Netscape® browser and Web server. The idea behind plug-ins is that a small piece of software is loaded into memory by the larger program, adding a new feature. Users need only install the few plug-ins they need, out of a much larger pool of possibilities. Plug-ins are often created by people other than the publishers of the software the plug-in works with.

Port

A place where information enters or leaves a computer, or both. On the Internet, port often refers to a number that is part of a URL, appearing after a colon (:) right after the domain name. Every service on an Internet server listens on a particular port number on that server. Most services have standard port numbers; for example, Web servers normally listen on port 80.

Protocol

A set of procedures or conventions used to formalize data transfer between points.

PU (Physical Unit)

In SNA, the component that manages and monitors the resources (such as attached links and adjacent link stations) of a node, as requested by an SSCP via an SSCP-SSCP session.

Security Certificate

A chunk of information (often stored as a text file) used by the SSL protocol to establish a secure connection. Security Certificates contain information about the certificate owner, the certificate issuer, a unique serial number or other unique identification, valid dates, and an

encrypted "fingerprint" that can be used to verify the contents of the certificate. In order for an SSL connection to be created, both sides must have a valid Security Certificate.

Server

In a TCP/IP network environment, a process that provides resources to a network. The server is the remote host process that services the request made by the client. The server is a background process that listens for incoming service requests. When a server receives a request, it establishes a connection with the requesting client, spawns a subprocess, and returns to listening for more incoming requests.

Session

A logical connection between two stations that allows them to communicate.

Single Sign-On (SSO)

The Single Sign-On feature operates by scripting logon to 3270 hosts and applications. Instead of having to record the log-on sequence and store the log-on credentials locally on the desktop, all user log-on credentials are stored and encrypted on the server.

SNMP (Simple Network Management Protocol)

A set of standards for communication with devices connected to a TCP/IP network. Examples of these devices include routers, hubs, and switches. A device is said to be “SNMP compatible” if it can be monitored and/or controlled using SNMP messages. SNMP messages are known as PDUs - Protocol Data Units. Devices that are SNMP compatible contain SNMP “agent” software to receive, send, and act on SNMP messages.

SSL (Secure Sockets Layer)

A protocol designed by Netscape Communications to enable encrypted, authenticated communications across the Internet. SSL is used mostly (but not exclusively) in communications between Web

browsers and Web servers. URLs that begin with HTTPS indicate that an SSL connection will be used. SSL provides three important things: privacy, authentication, and message Integrity.

TCP/IP (Transmission Control Protocol/Internet Protocol)

(1) A connection-oriented byte-stream service that is reliable and flow controlled (TCP)and a connectionless datagram service that transparently forwards messages through the gateway (IP). TCP is built on top of IP. TCP/IP protocols are defined by the Department of Defense Advanced Research Projects Agency (DARPA). (2) Synonym for TCP/IP Application Suite. See TCP/IP Application Suite.

TCP/IP Application Suite

A collective term used for referring to DARPA-standard applications commonly distributed with the TCP/IP protocol. Two such applications are File Transfer Protocol (FTP) and Terminal Emulator Protocol (TELNET).

TELNET

(1) Acronym for teletype network. (2) A TCP/IP protocol used for remote login between hosts.

Terminal

A display station, RJE workstation, or printer.

Terminal emulator

The OpenConnect Server's SNA3270 Terminal Emulator provides IBM 3270 Information Display System emulation of IBM 3278 Display Stations, IBM 3278 Color Display Stations, and IBM 3287 Printers. The 5250 TELNET Server terminal emulation emulates IBM 5250 midrange terminal types.

URL (Uniform Resource Locator)

The standard way to give the address of any resource on the Internet that is part of the World Wide Web (http://www.URL.com).

VT emulation

Imitation of a VT220 computer terminal on a terminal connected to a TCP/IP computer so that the imitating system accepts the same data, executes the same programs, and achieves the same results as the imitated IBM terminal.

VT session

The name of a session when the TCP/IP computer is communicating with the host computer through its Presentation Services.

Index

.NET
  Attributes, 165
  Color
    Preferences, 158
  components, 41, 42, 43
  Hot Spots, 158, 167
  Preferences
    Color Configuration, 158
    Hot Spots Configuration, 158
  Preferences, Edit Attributes, 165, 166
3287
  Emulation Client Features, 59, 131, 208
  Menu
    File, 59, 131, 208
    Help, 60, 132, 209
    Setting, 60, 131, 208
  Print, 71, 141, 219
  Print to HTML Client, 286, 288
3812
  Emulation Client Features, 60, 131, 208
  Print, 72, 288
3812 Emulation Client Features, 60, 131, 208

A

Advanced Options, 81, 149
API, 41
Append, 80, 83, 148, 152, 228, 231
Applet, 48
ASCII, 80, 83, 148, 152, 228, 231
Associated Printer, 286
Attributes, 91
  Associate with session, 92, 166
Audio
  Silence Alarm, 169, 250
  Sound Event, 169, 250
Auto Tab, 284

B

BASIC Script
  remove, 115, 192, 274
Binary, 80, 83, 148, 152, 228, 231

C

CICS VS Files
  Sending and Receiving, 76, 144, 224
Clear Screen, 106, 186, 265
ClickPad, 56, 127, 161, 164, 165, 203, 242, 280
Client Emulation Features, 50, 75, 122, 143, 198, 223
Color
  Associate with session, 90
  Associate with session,.NET client, 159
  Preferences, 90
  Swing Preferences, 238
Com, 39
Configuration
  EHLLAPI, 52
  Key Commands, 99, 101, 102, 103, 105, 106, 178, 179, 183, 184, 185, 260, 261, 262, 263, 264
  Key commands, 103, 183, 262
  Key Map/Macro Editor, 97, 175, 257
  Light Pen, 92, 174
  Light Pen, swing client, 256
  WebConnect macros, 107, 181, 266
Continue Paste, 124, 200
Controller Applet, 48
Copy, 124, 200
  and Append, 130, 207
  Append, 124, 200
  block, 56, 127, 204
  Macro File, 112, 189, 272
  right-click menu, 130, 207
  select field, 56, 128, 204
  stream, 56, 127, 204
  Suppress Trailing CR, 52
Copy/Cut
  Block, 169, 250
  Stream, 169, 250
  Suppress CR, 169, 250
Cross-hair Cursor, 95
  .NET client, 173
  swing client, 255

Cursor
Menu, 94
.NET client, 172
swing client, 170, 251, 254
Mouse, 92
.NET client, 174
setting, 92
swing client, 256
Mouse setting
.NET client, 174
swing client, 256
Move Here, 130, 207
Options, 93
.NETclient, 172
swing client, 254
Settings, 52
Cut, 124, 200

D

Data Set Name, 77, 145, 225
Date/Time
Print to File, 73, 220
Deleting a Macro, 66, 136, 213
Desktop Emulator, 44–45, 289–293
Authentication, 291–293
Installation, 44
Updates, 293
DFT, 75, 143, 223
Display Language, 40, 41
Downloads, 40, 41

E

Edit
Append, 124, 200
Continue Paste, 124, 200
Copy, 124, 200
Cut, 124, 200
Key Map, 51
Past, 124, 200
See also Copy, 52
EHLLAPI, 39, 97, 171, 175, 252, 257
Configuration Window, 52
enable, 52
Emulation Space, 55, 126, 203
Emulator
Authentication, 291–293
Desktop, 44–45, 289–293
Icon Values, 54, 125, 201
Toolbar definitions, 54, 125, 201
Updates, 293
Enter key, 180
error
code 302 HTTP, 302
code 403 HTTP, 302

F

File
Macro, 123, 199
New Session, 123, 199
Print Screen, 123, 199
Save, 123, 199
Session List, 123, 199
Start Print, 123, 199
Transfer, 123, 199
File Transfer, 75, 143, 223
Lists, 85
Multiple, 84, 153
fingerprint, 306
Flush Print, 132
Folders, 27, 29
Font, 52, 60, 171, 252, 253
FTP, 123
Function, 103, 179, 261
AID Keys, 103, 179, 261

H

Hot Spots, 88
swing client, 248
HTML, 286
3270/3287 Associated Printer Session, 286
5250, 281
ClickPad Functions, 284
Color Scheme, 283
Keyboard Mapping, 285
print 3287, 286

I

Identity, 29
IND$FILE, 75, 84, 143, 153, 223, 233

Input Field Validation, 282
Install
Print, 40, 41
Invalid Characters, 36, 37

J

Java, 48
JavaScript, 32
JDK 1.1 Print, 32
JRE, 48
Controller Applet, 48
placeholder, 215

K

Key Command, 100, 101, 178, 260
configuration, 99, 101, 102, 103, 105, 106, 178, 179, 183, 184, 185, 260, 261, 262, 263, 264
Wait Statements, 103, 183, 262
Key Map
Associate with session, 89
Associate with session, .NET client, 168
Associate with session, swing client, 249
Edit, 51
Enter Key, 180
Key Map/Macro Editor, 97, 175, 257
Keyboard
Mapping, 56, 128, 204
Unlock, 106, 186, 265
Keystrokes
3270 Input, 283
5250 Input, 283
Alpha, 283
Alphanumeric, 283
Numeric, 283

L

Language, 30
Light Pen, 92
.NETclient, 174
swing client, 256
line rule, 93
.NET client, 172
swing client, 254
Log
session to file, 51
Session to Printer, 70, 140, 218
session to printer, 51
Look and Feel, 171, 252

M

Macro, 112, 189, 272
Compare Variables, 103, 180, 262
Copy_Paste, 102, 179, 261
Delete statement, 180, 262
Execute, 102, 179, 261
Goto statement, 103, 180, 262
Label execution, 103, 180, 262
Move, 102, 180, 262
Name, 63, 133, 210
Pause, 102, 179, 261
Play Macro, 103, 180, 262
Play Macro Menu, 63, 135
pre-WC 6.3, 105, 185, 264
Record Play, 61, 132, 209
Record/Play Settings, 51
Record/Stop, 66, 136, 212
Remove statement, 103
Replace statement, 103, 180, 262
Stop a Macro During Play, 66, 136, 212
toolbar, 50, 51, 52, 53, 123, 199
Type, 102, 180, 262
variables, 103, 179, 261
Wait statement, 103, 180, 262
Menu
Configuration Settings, 92
.NETclient, 169
Menu Bar, 51, 59, 123, 131, 199, 208
right-click, 130, 206
Setting, 52

N

notational conventions, 4
note, defined, 4

O

OIA, 282

P

passwords, 36, 37

Paste, 58, 124, 130, 200, 206
Block, 170, 251
block, 56, 127, 204
by Fields, 170, 251
Continue, 124, 200
Hybrid, 170, 251
right-click menu, 130, 207
Stream, 170, 251
stream, 56, 127, 204
Suppress Trailing CR, 52
Platform, 171, 252
Playing a Macro, 65, 135, 211
Pop-up Window Blockers, 48
Preferences
Attributes, 124, 200
Clickpad, 124, 200
Color Configuration, 90
Colors, 124, 200
Edit Attributes, 91
Hot Spots Configuration, 88, 167
Hotspots, 124, 200
Keyboard Maps, 124, 200
Settings, 124, 200
Startup Macros, 124, 200
VB Scripts, 124, 200
Print
Date-Time Stamp, 72, 220
Date-Time stamp, 73
Flush Print, 132
HTML Sessions, 286
Log Session to Printer, 51, 70, 140, 218
log session to printer, 51
Partial Screen, 139, 217
right-click menu, 130, 207
Screen, 69, 139, 217
session, 59
to File, 32
uninstall, 41
Prompt, 103, 180, 262

R

Record, 63, 133, 210
Recording a Macro, 63, 133, 210
Right-Click Menu, 130, 206
rule
horizontal, 93, 172
swing client, 254
vertical, 93
vertical, swing client, 254
vertical,.NET client, 172

S

Saving a Macro File, 64, 134, 211
Screen
Print, 69, 139, 217
Print Partial, 217
Script Editor, 115, 191, 274
ScrollBack, 171, 252
Select All, 51, 54, 56, 124, 125, 128, 200, 204
right-click menu, 130, 207
Server
Level Key Mapping, 99, 178, 260
Session
controller, 48
Folders, 27
folders, 29
log to printer, 70, 140, 218
logging, 69, 139, 217
switching, 130
session
switching, 206
Sessions Tab, 289–291
Setting
Menu, 52
Single Sign-On, 34, 73, 221, 306
spool directory, 286
Start Sessions, 27
stream, 56, 127, 204
Swing
Attributes, 239
Associate with session, 240
Color
Associate with session, 238
Cursor Options, 254
Preferences
colors, 238
Edit Attributes, 239
Hot Spots Configuration, 248
Settings Menu, 250

Switch to Session, 130, 207

T

Toolbar, 54, 125, 201
  macro, 50, 51, 52, 53, 123, 199
Transfer Options, 77, 145, 225
TSO Files
  Sending and Receiving, 78, 146, 226
Type ahead, 93
  .NET client, 172
  swing client, 254

U

Uninstall
  Print, 41
User
  names, 36
  Preferences, 40, 41
  View, 32
user names, 37

V

VB Scripts
  creating, 112, 114, 189, 190, 272, 273
  editing, 115, 191, 274
  import
    VB Scripts
      Editing, 114, 190, 273
VM Files
  Sending and Receiving, 82, 150, 230
VT
  session logging, 69, 139, 217

W

Wait Statements, 103, 183, 262
warning, defined, 4
wcemuapi.exe, 41
WebConnect Macro
  Associate with session, 99, 260
  configuration, 107, 181, 266
  Create New, 109, 268
  Import, 110, 186, 269
  Key Command Configuration, 99, 177, 259
  Key Maps, 98, 108, 182, 259, 267
  Keyboard Maps, 177
  synchronized states, 103, 183, 262
  text messages, 103, 183, 262
WebConnect Script Editor, 115, 191, 274
WebPrint, 40

WebConnect
User Guide
WebConnect 7.3
First Edition

OpenConnect Systems, Inc.
2711 LBJ Freeway, Suite 700
Dallas TX 75234
Phone: 972.484.5200
Fax: 972.484.6100
Web: www.oc.com